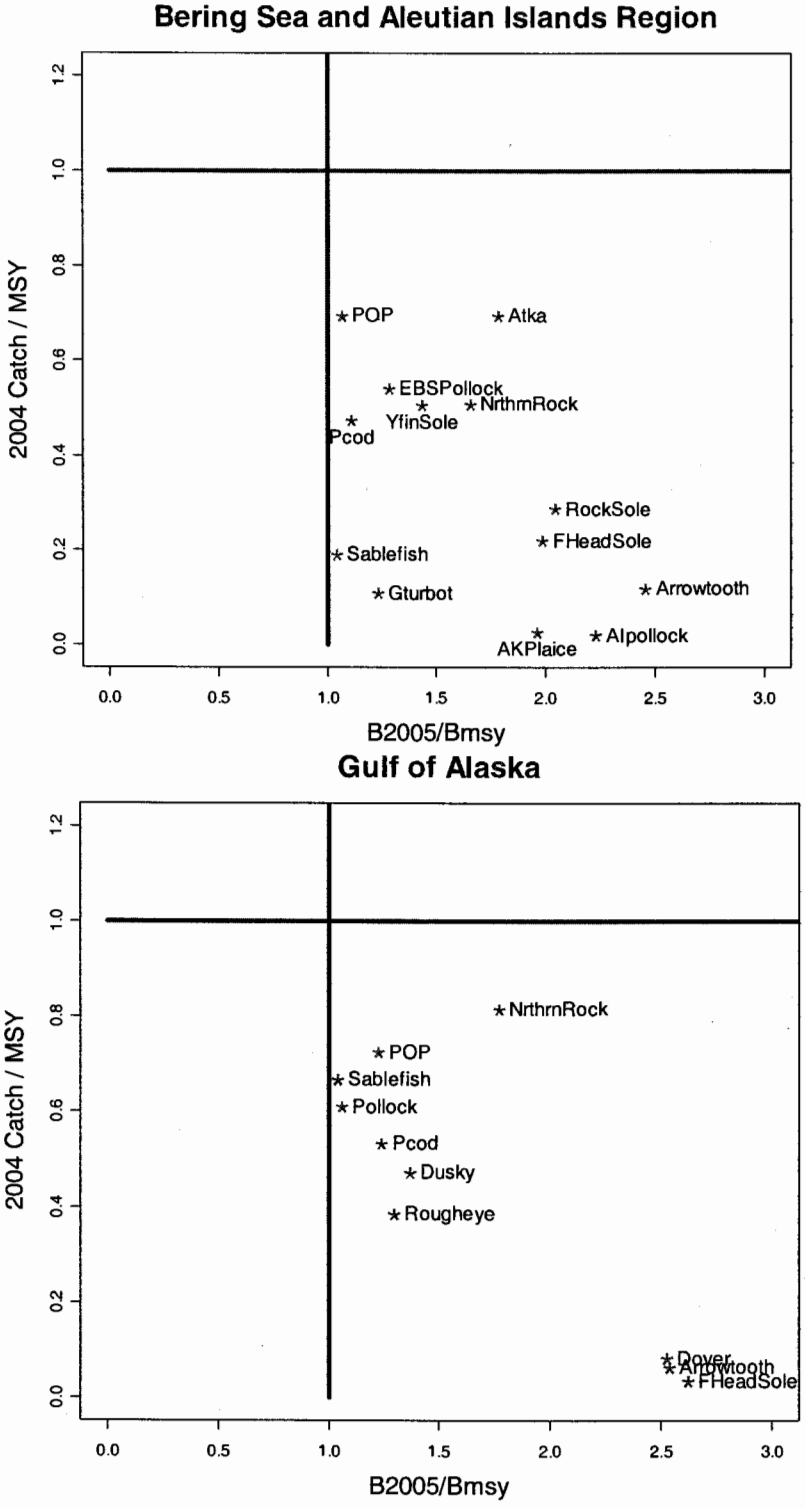
Figure B.3.1-1. Stock status relative to B_{MSY} and MSY for the major target species in the BS and AI region and the Gulf of Alaska region.



Notes: B_{MSY} = biomass maximum sustainable yield
MSY = maximum sustainable yield

Figure B.3.2.3-1. Catch per tow of female red king crab >89 mm from Bureau of Commercial Fisheries survey in May 1968.

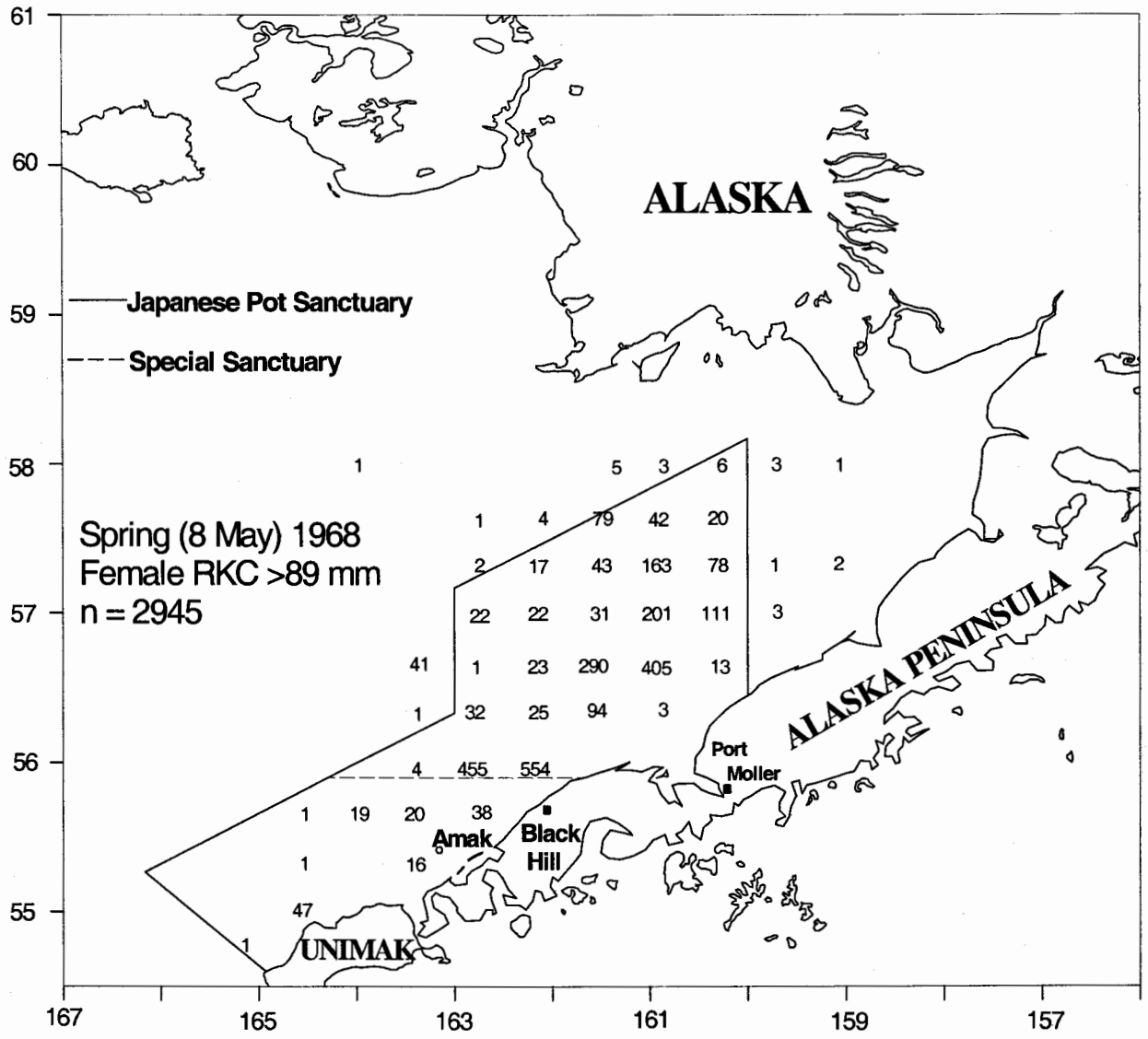


Figure B.3.2.3-2. Large female red king crab (>=90 mm carapace length) from the NMFS 2004 survey. Area of the circle is proportional to CPUE per tow.

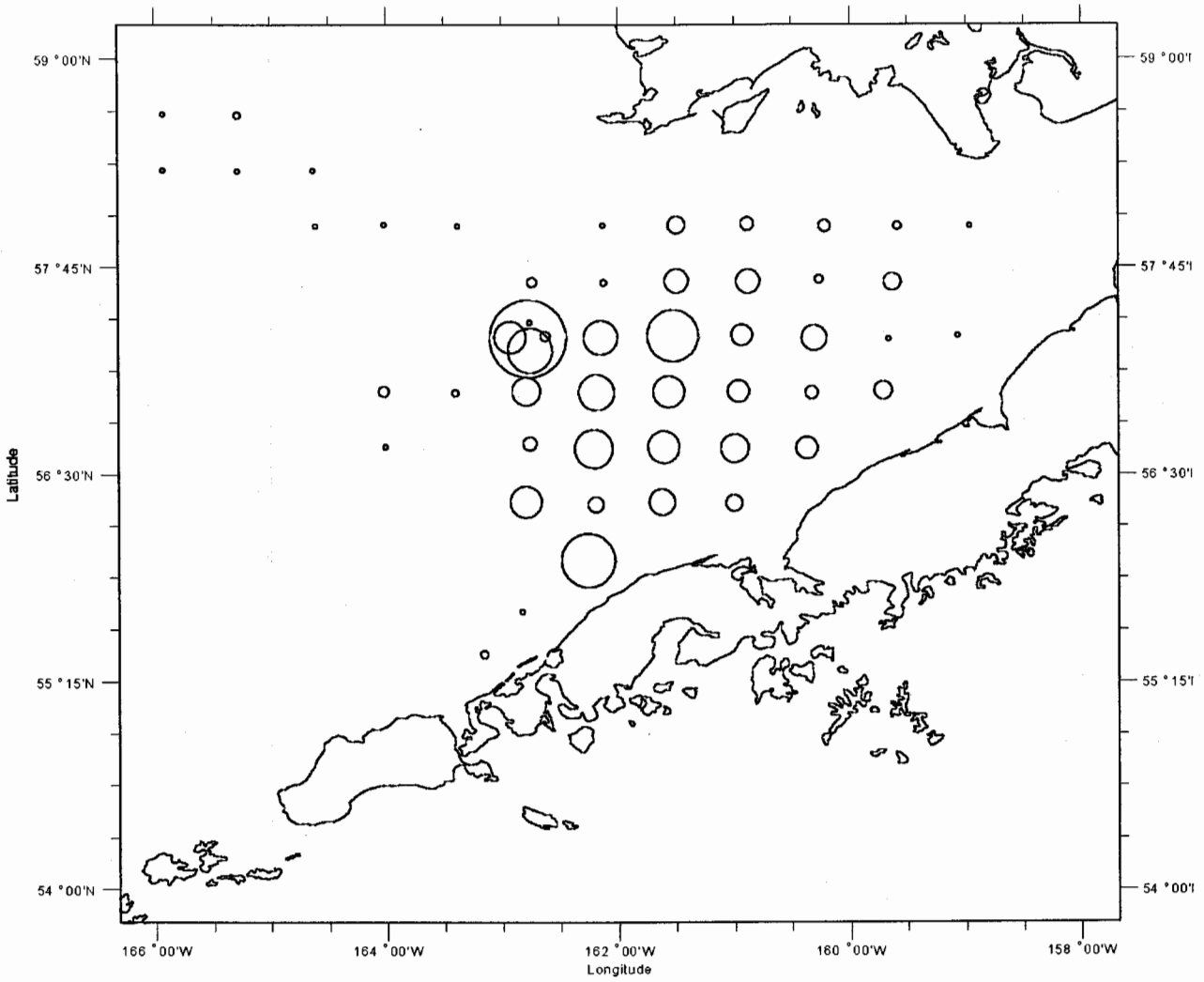


Figure B.3.2.3-3. Large male (>=135 mm carapace length) CPUE from the NMFS 2004 survey. Area of the circle is proportional to CPUE per tow.

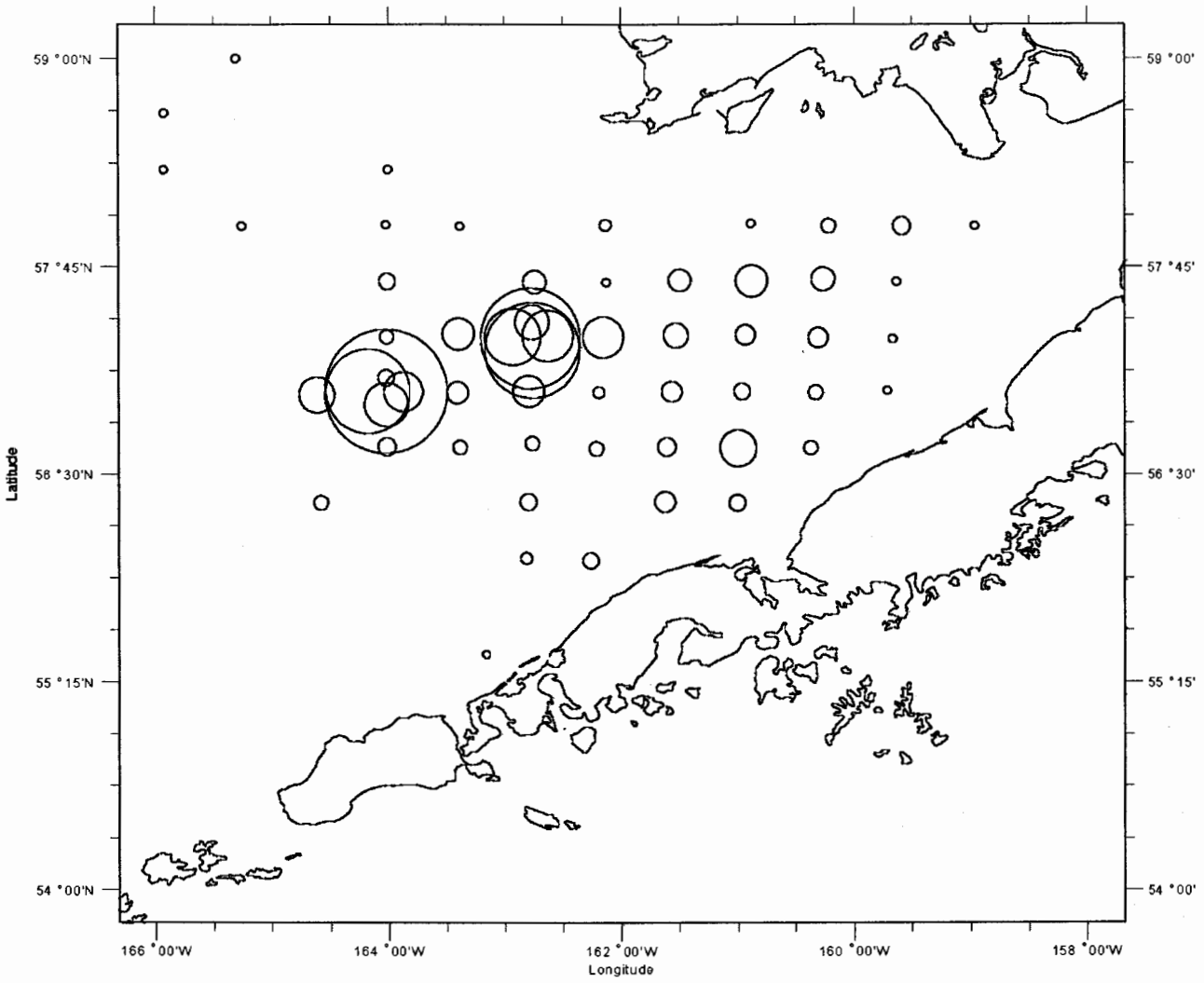


Figure B.3.2.3-4. CPUE trends of Bristol Bay legal male red king crab from calibrated Japanese tangle net fishing and U.S. directed pot fishing, as well as abundance estimates of legal males from NMFS surveys and from stock assessment modeling.

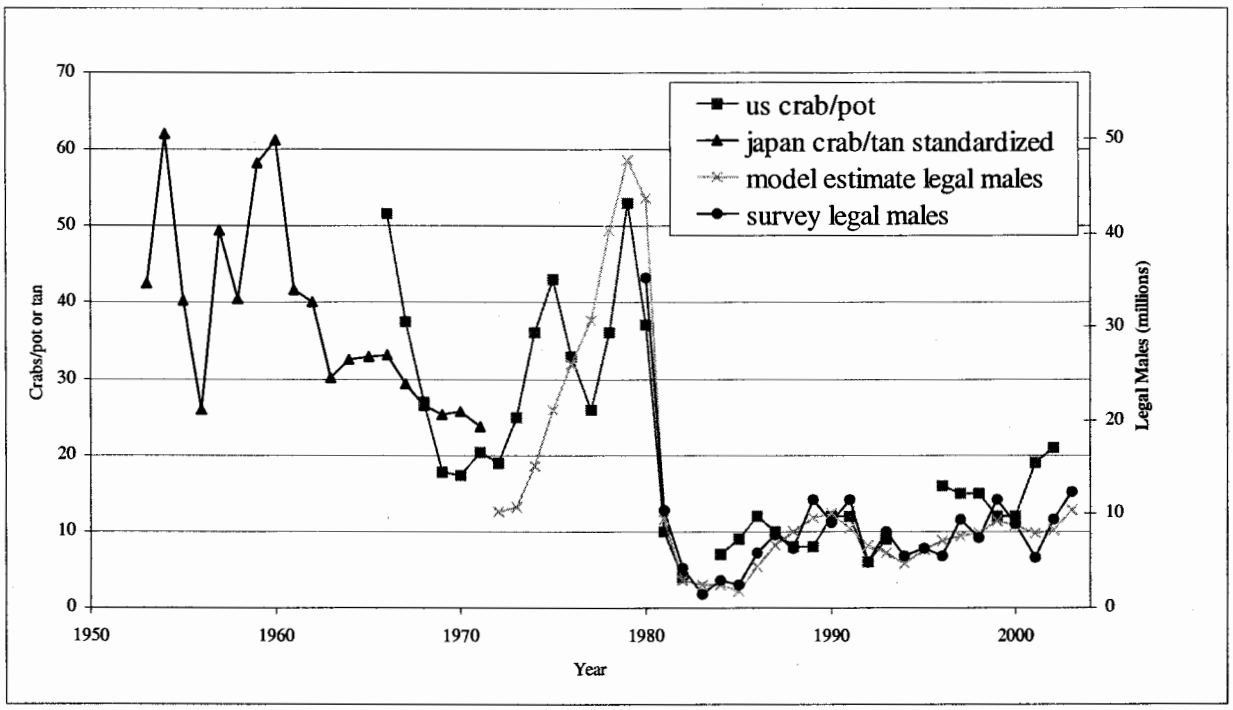


Figure B.3.2.3-5. Recruitment from red king crab stock assessment model for male and female red king crab by fertilization year.

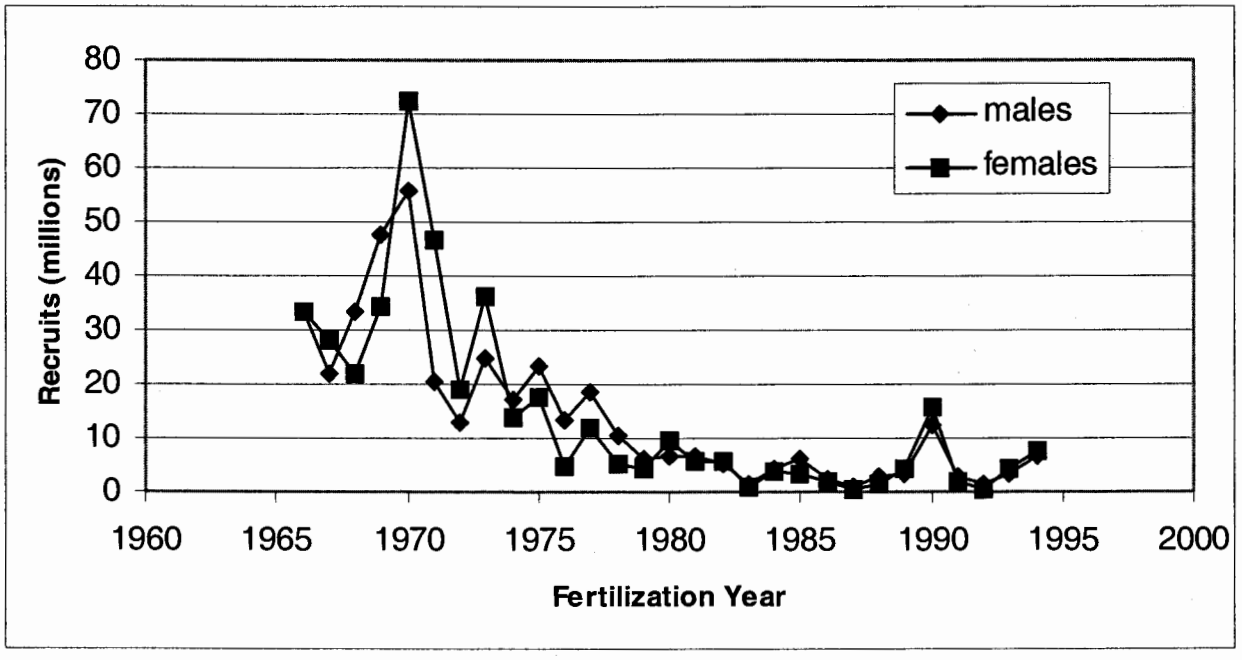


Figure B.3.2.3-6. Numbers of female red king crab greater than 89 mm caught per tow from Bureau of Commercial Fisheries survey in 1959.

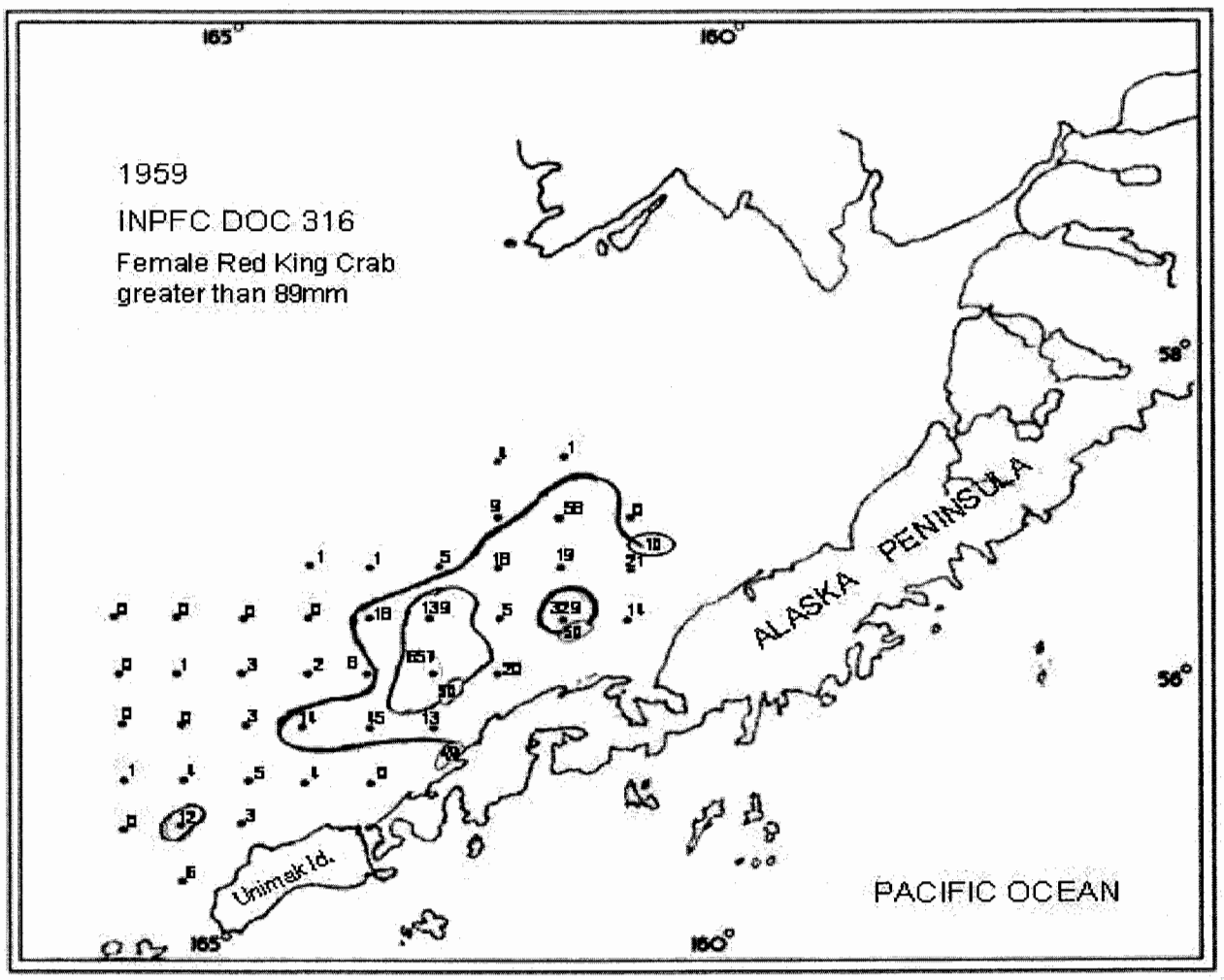


Figure B.3.2.3-7. Distribution of female red king crab during the spawning season from Japanese exploratory fishing in 1964.

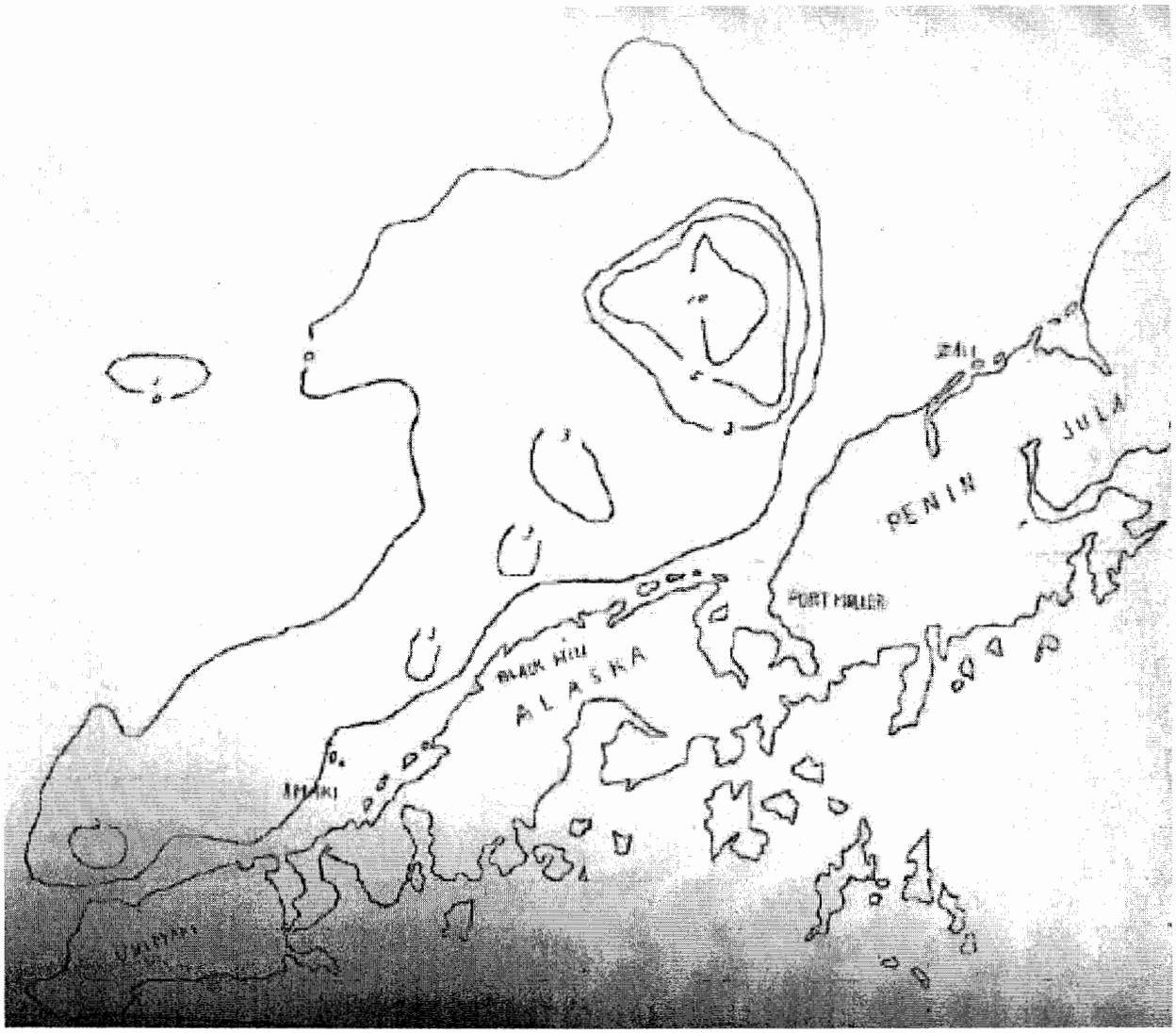


Figure B.3.2.3-8. Distribution of female red king crab during the spawning season from Japanese exploratory fishing in 1963.

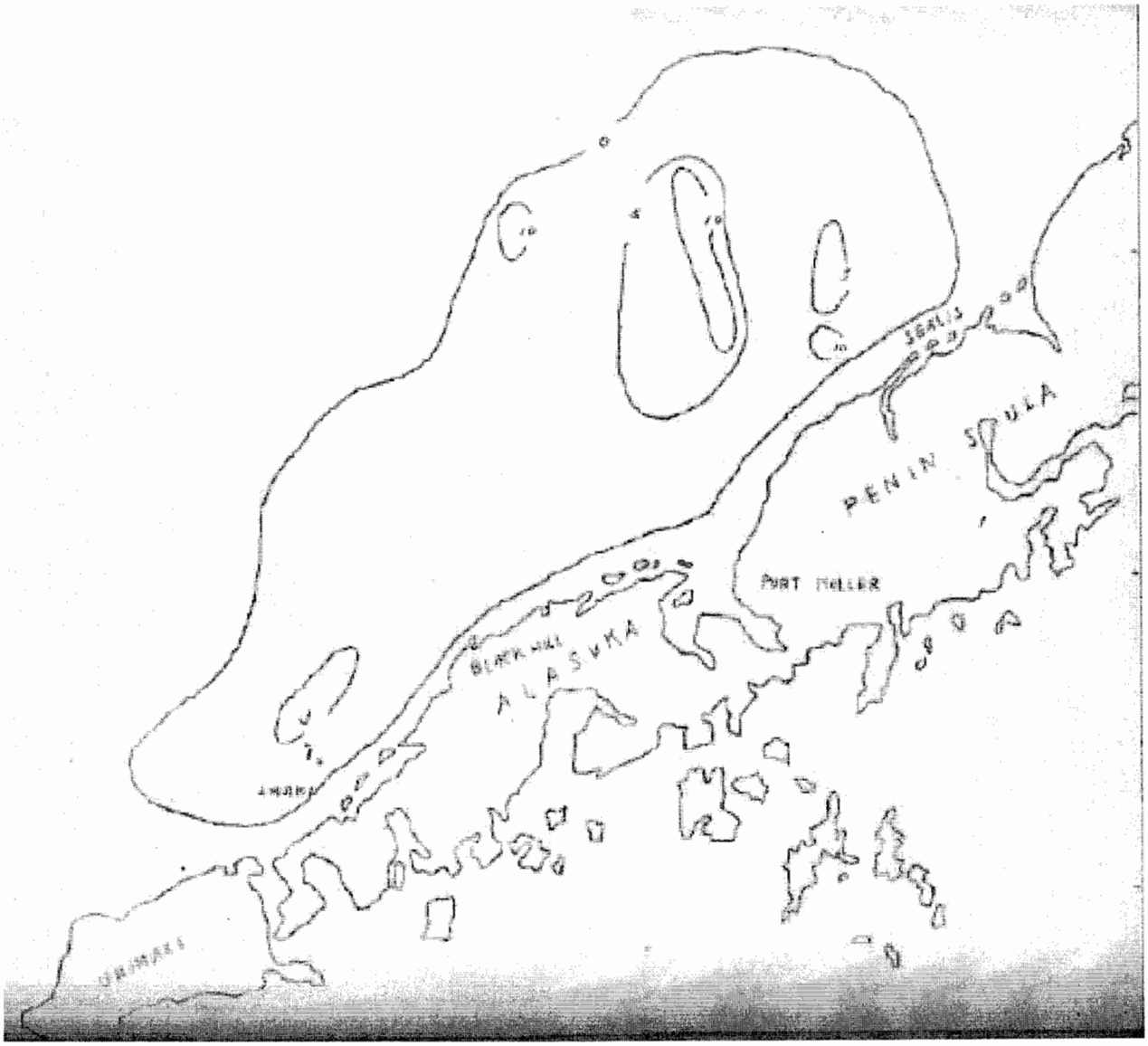


Figure B.3.2.3-9. Distribution of commercial size male red king crab during the spawning season from Japanese exploratory fishing in 1964.

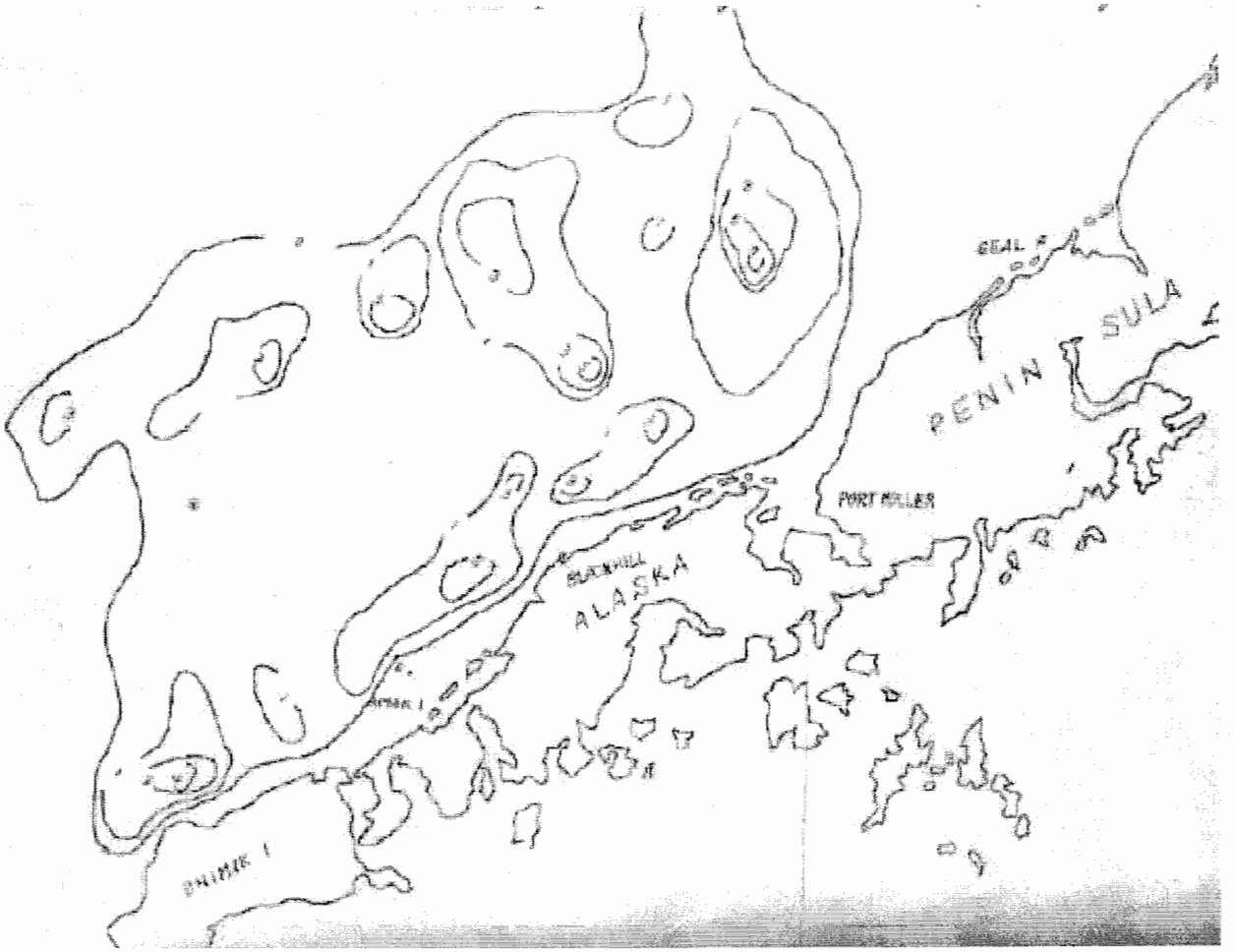


Figure B.3.2.3-10. Distribution of commercial size male red king crab during the spawning season from Japanese exploratory fishing in 1963.

Figure B.3.2.3-11. Small red king crab (males <110 mm carapace length and females <90 mm carapace length) from the 2004 NMFS survey. Area of the circle is proportional to CPUE per tow.

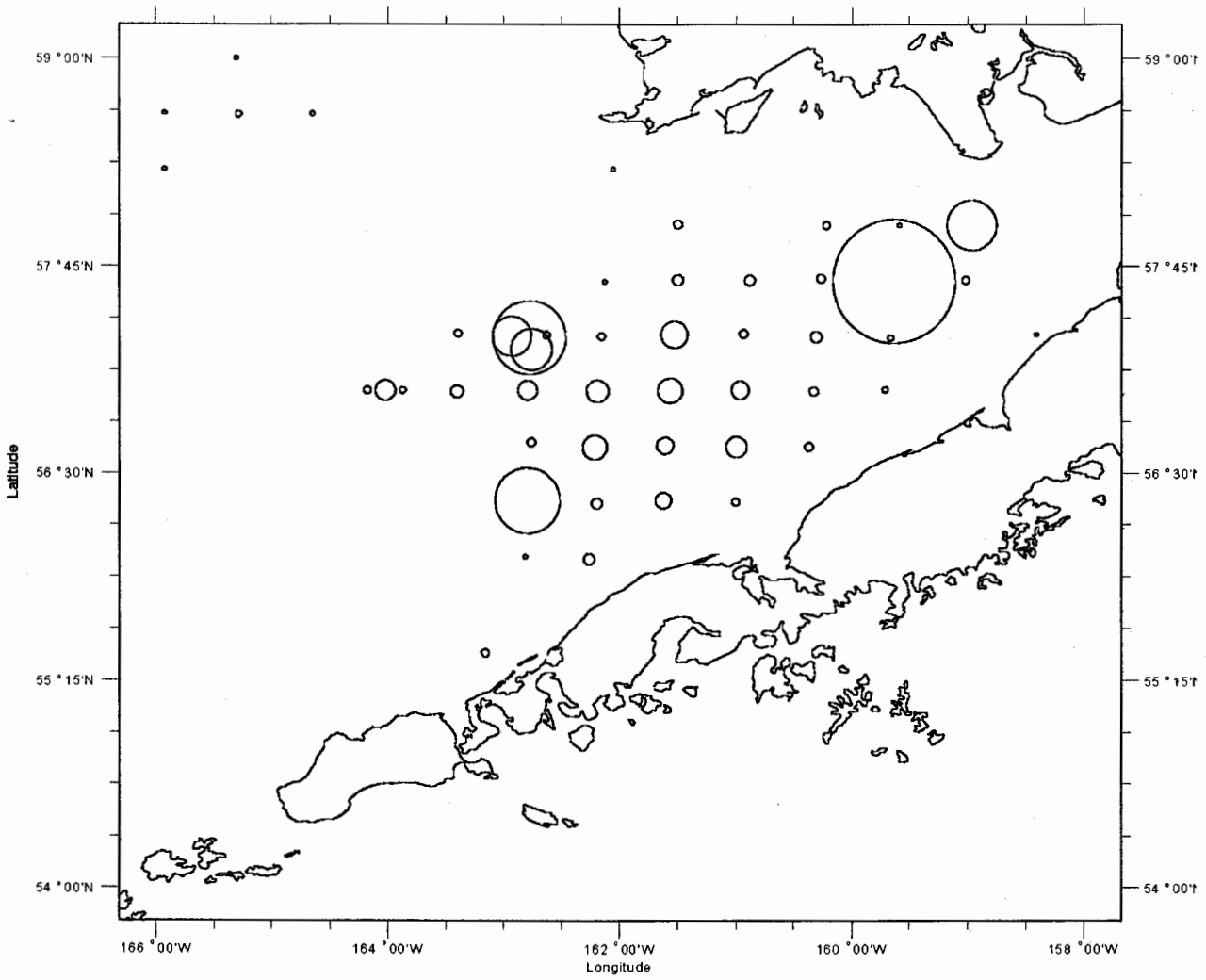


Figure B.3.2.3-12. Survey total mature biomass (males and females) of Bristol Bay red king crab from 1980 to 2003. Solid horizontal line is B_{MSY}.

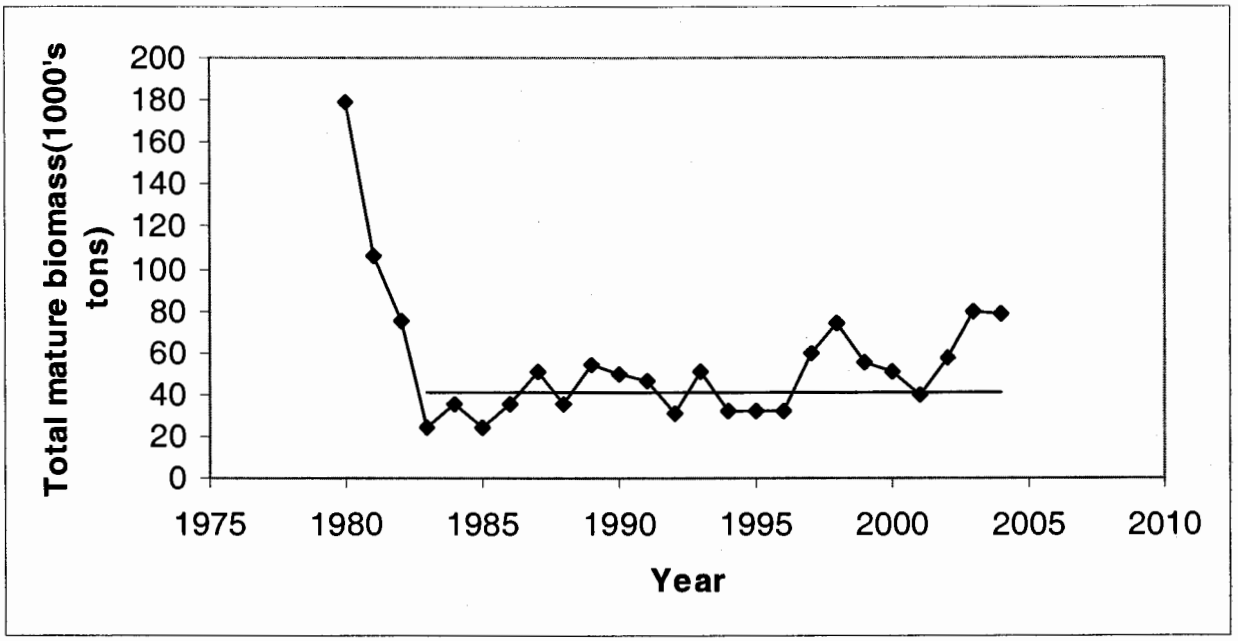


Figure B.3.2.3-13. Number of tows in high and low effects areas in the EBS from 1981 to 2002.

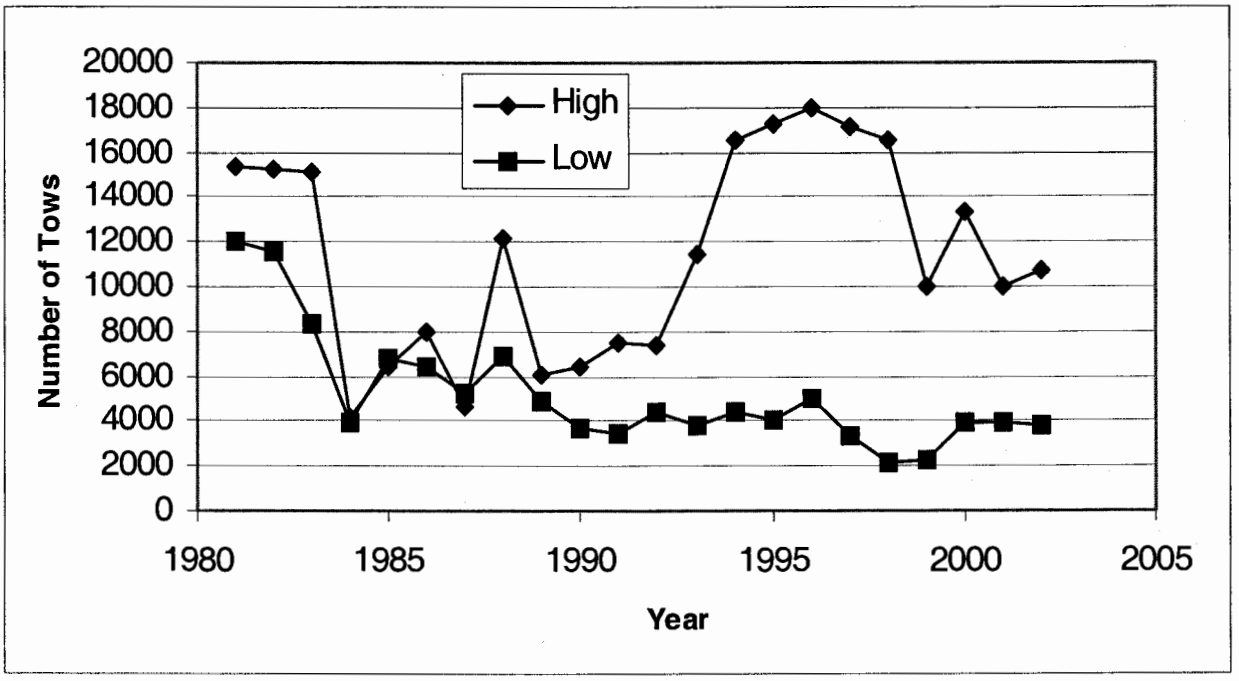


Figure B.3.2.4-1. Pribilof Islands blue king crab survey estimates of total mature biomass (1,000 tons) from 1981 to 2003.

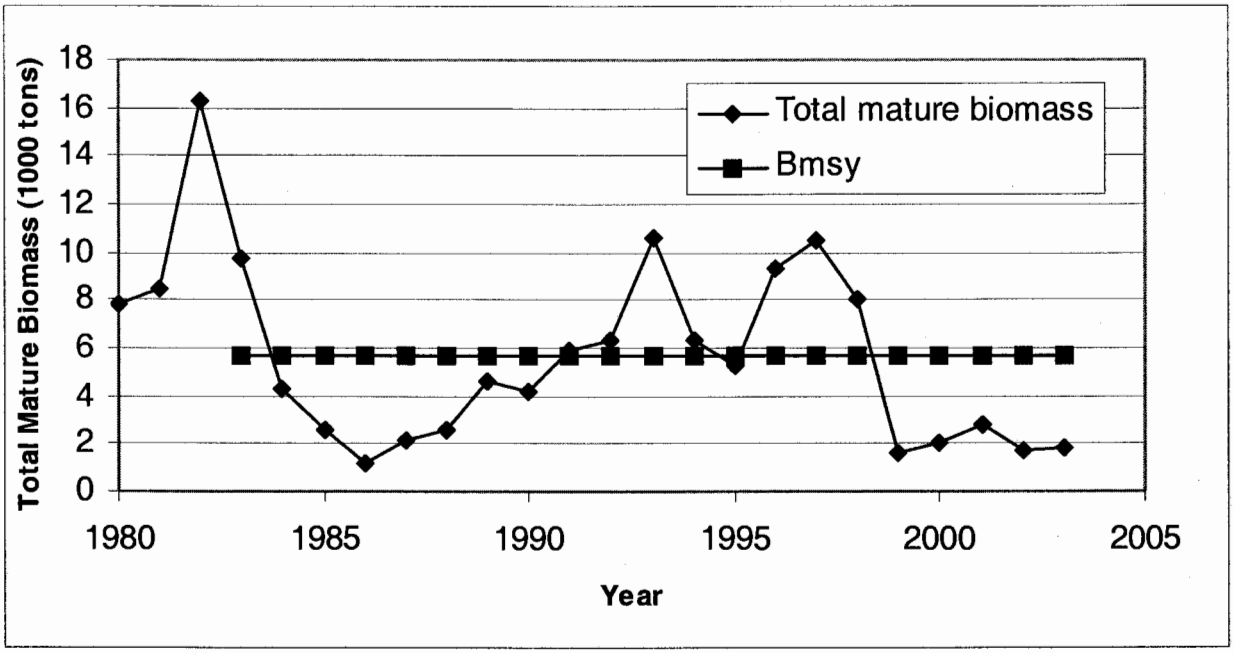


Figure B.3.2.4-2 St. Matthew Island blue king crab survey estimates of total mature biomass (1,000 tons) from 1981 to 2003.

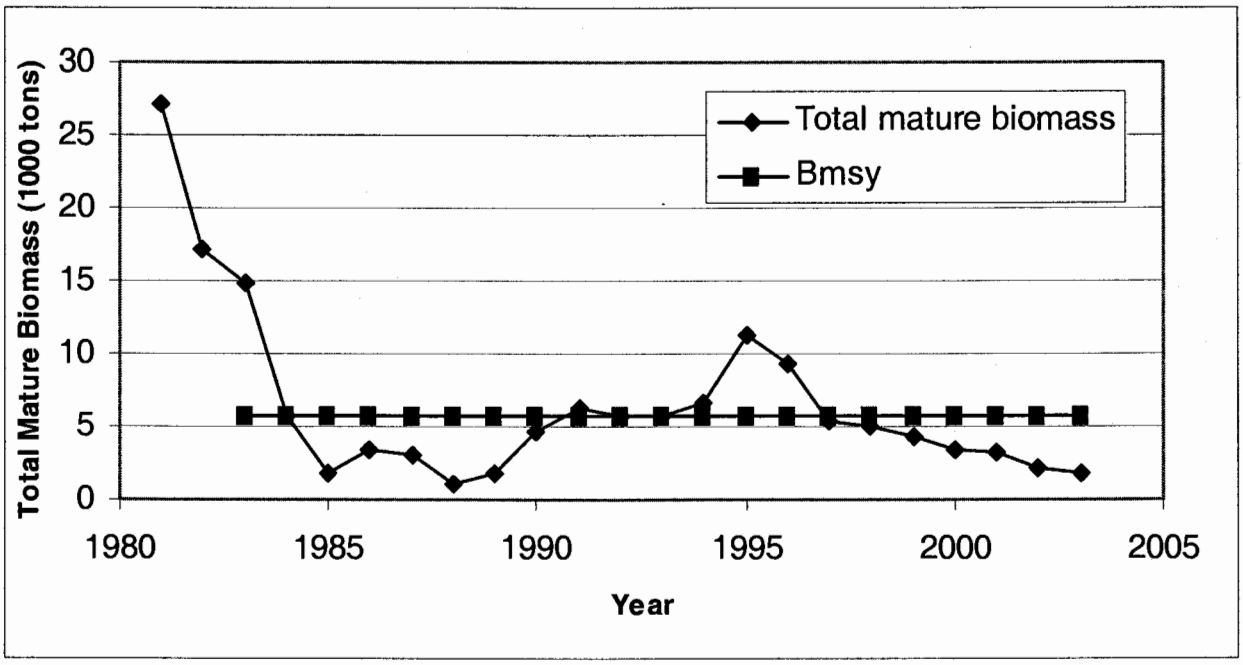


Figure B.3.2.7-1. Large female Tanner crab (>=85 mm carapace width) CPUE from 2004 NMFS survey.

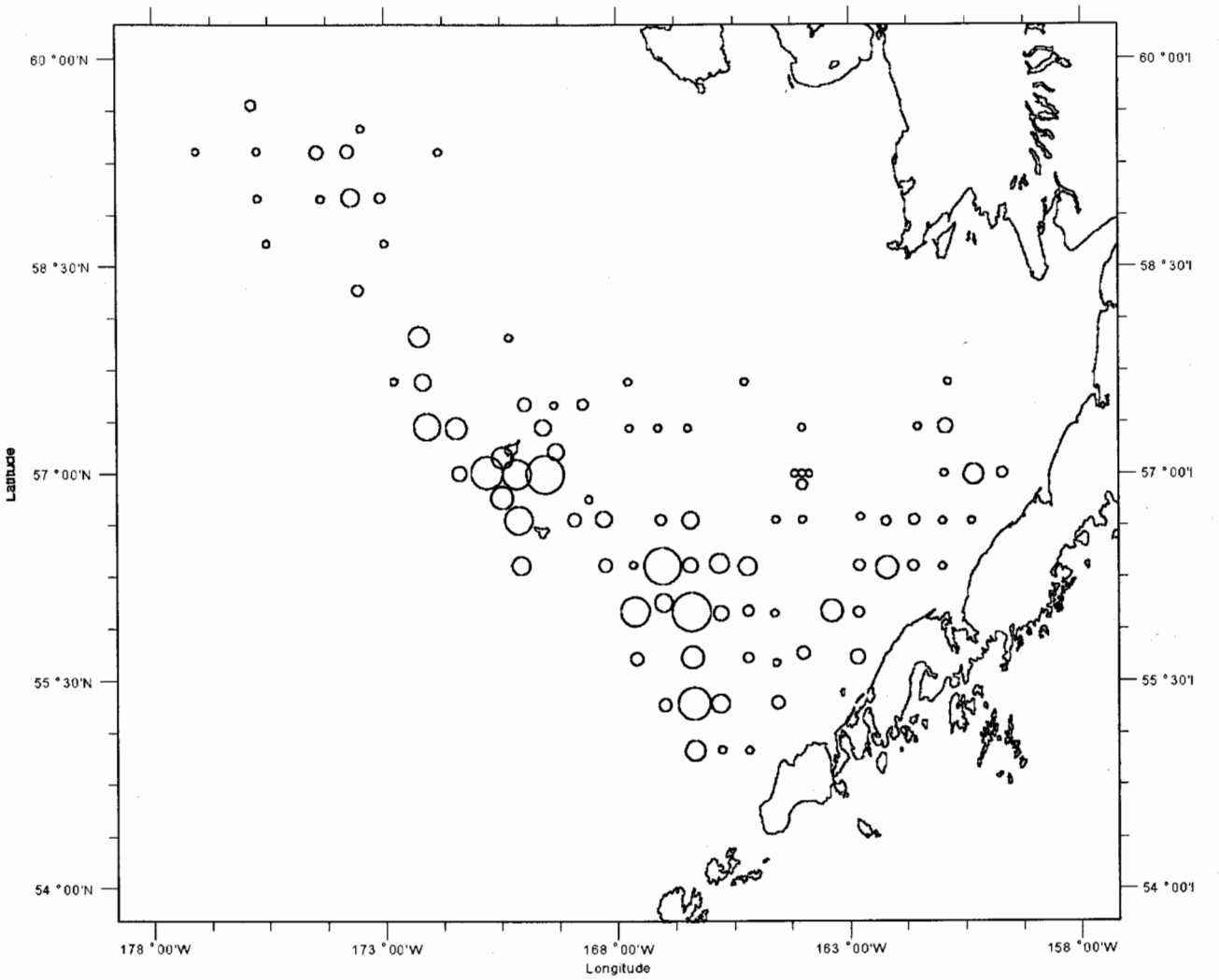


Figure B.3.2.7-2. Large male Tanner crab (>=138 mm carapace width) CPUE from 2004 NMFS survey.

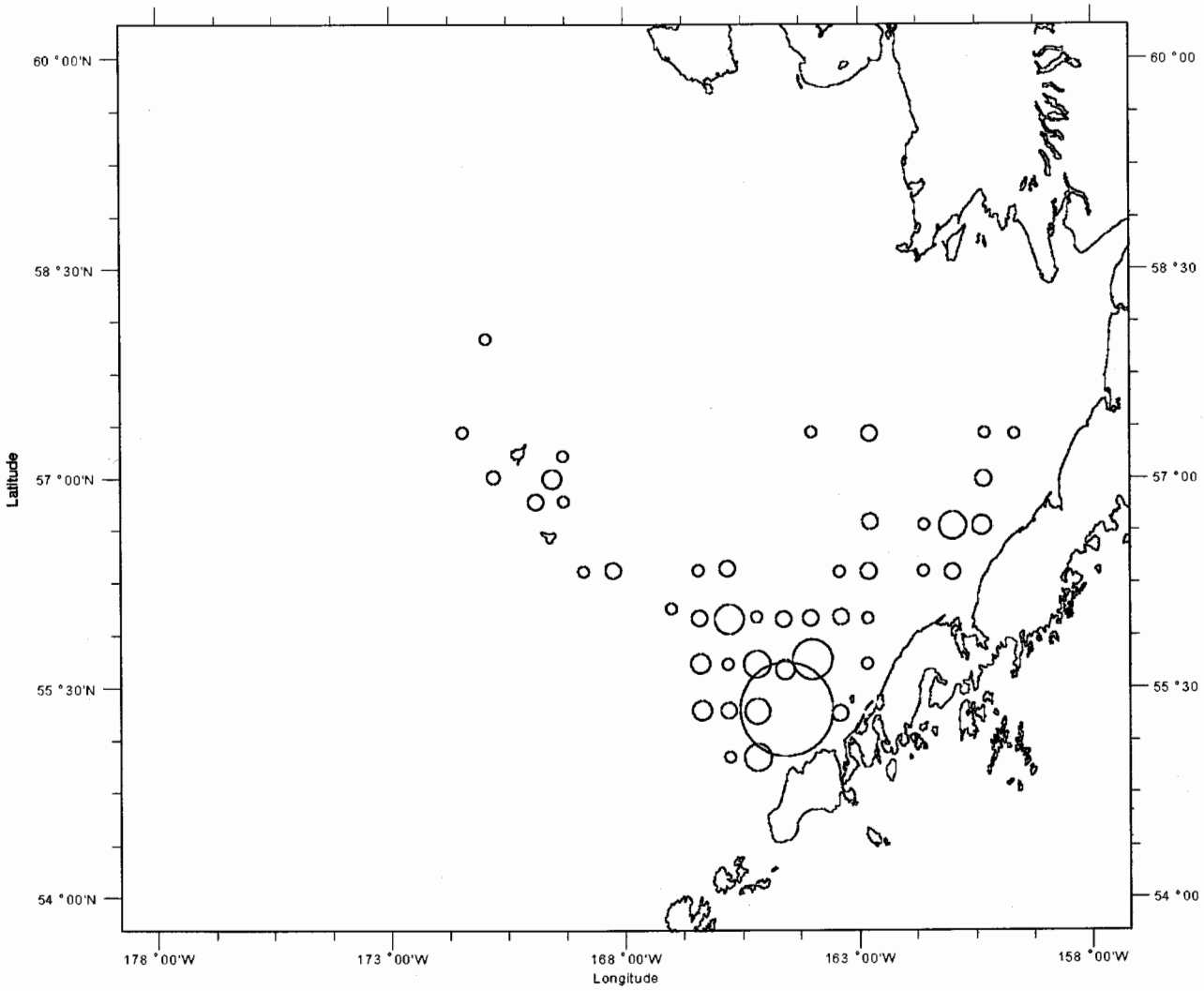


Figure B.3.2.7-3. Combined small male (<110 mm carapace width) and small female (<85 mm carapace width) Tanner crab CPUE from 2004 NMFS survey.

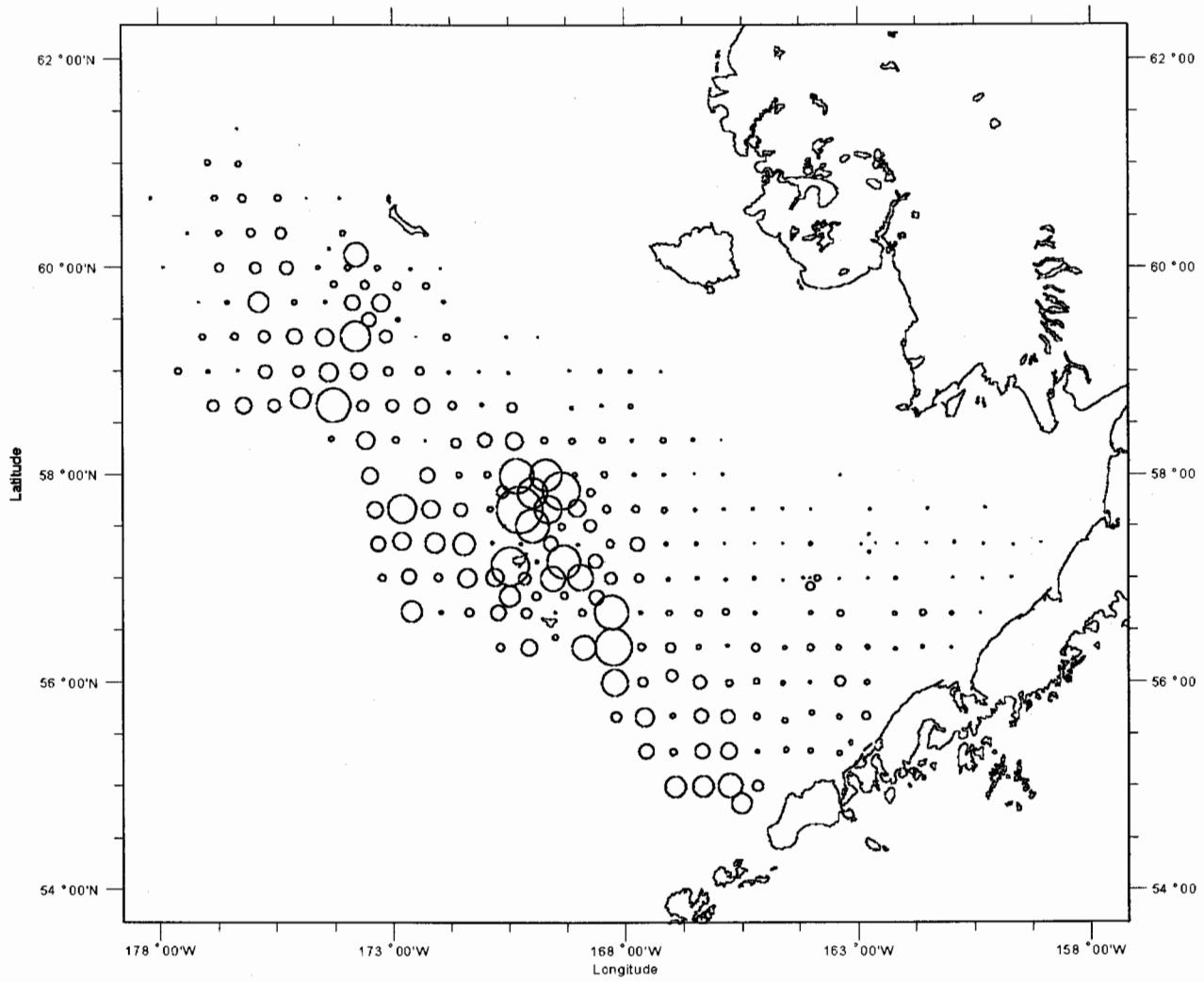


Figure B.3.2.7-4. Number of large male Tanner crab (>138 mm carapace width) caught per mile towed in the 1979 NMFS trawl survey

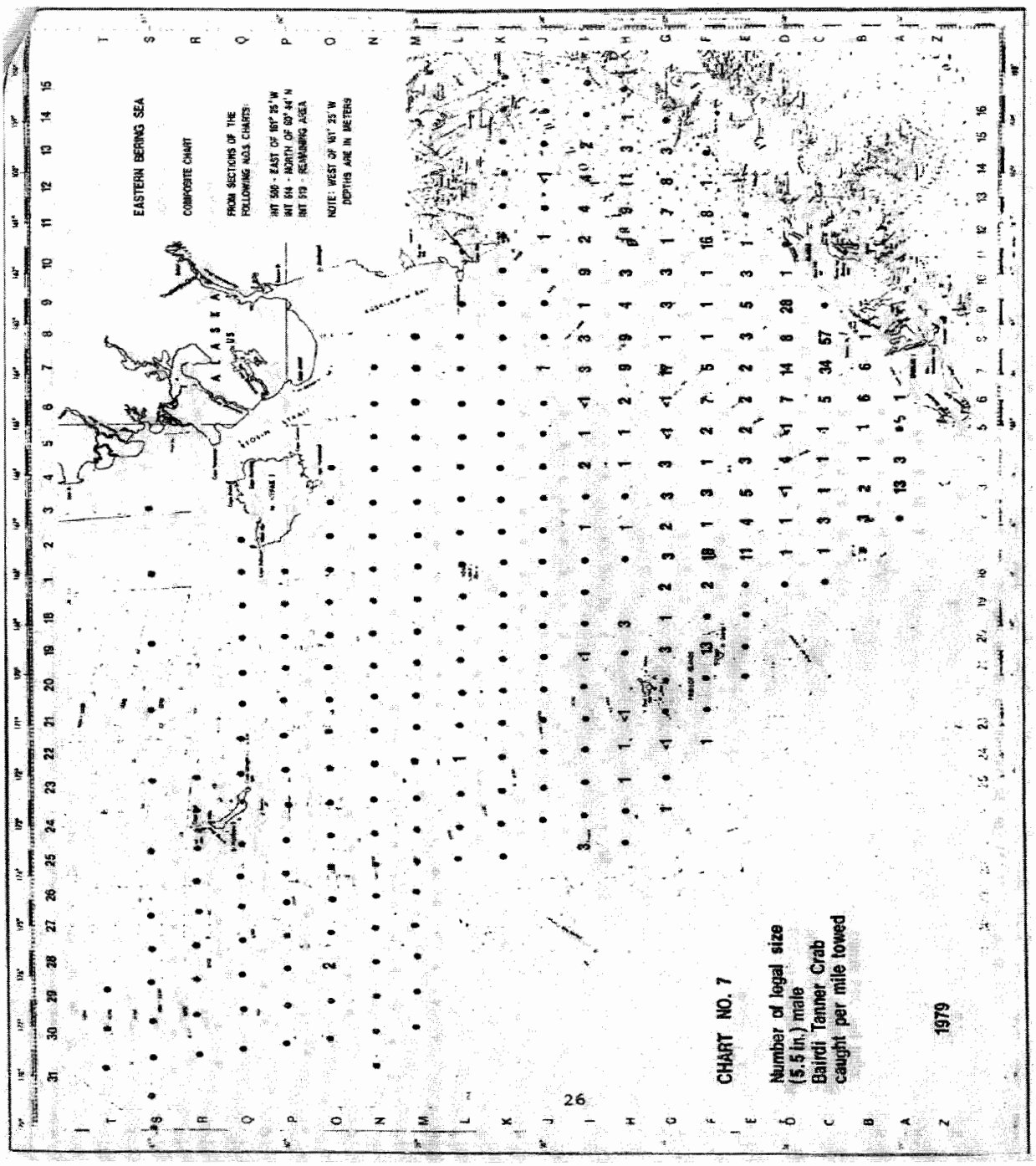


Figure B.3.2.7-5. Number of large male Tanner crab (>138 mm carapace width) caught per mile towed in the 1984 NMFS trawl survey.

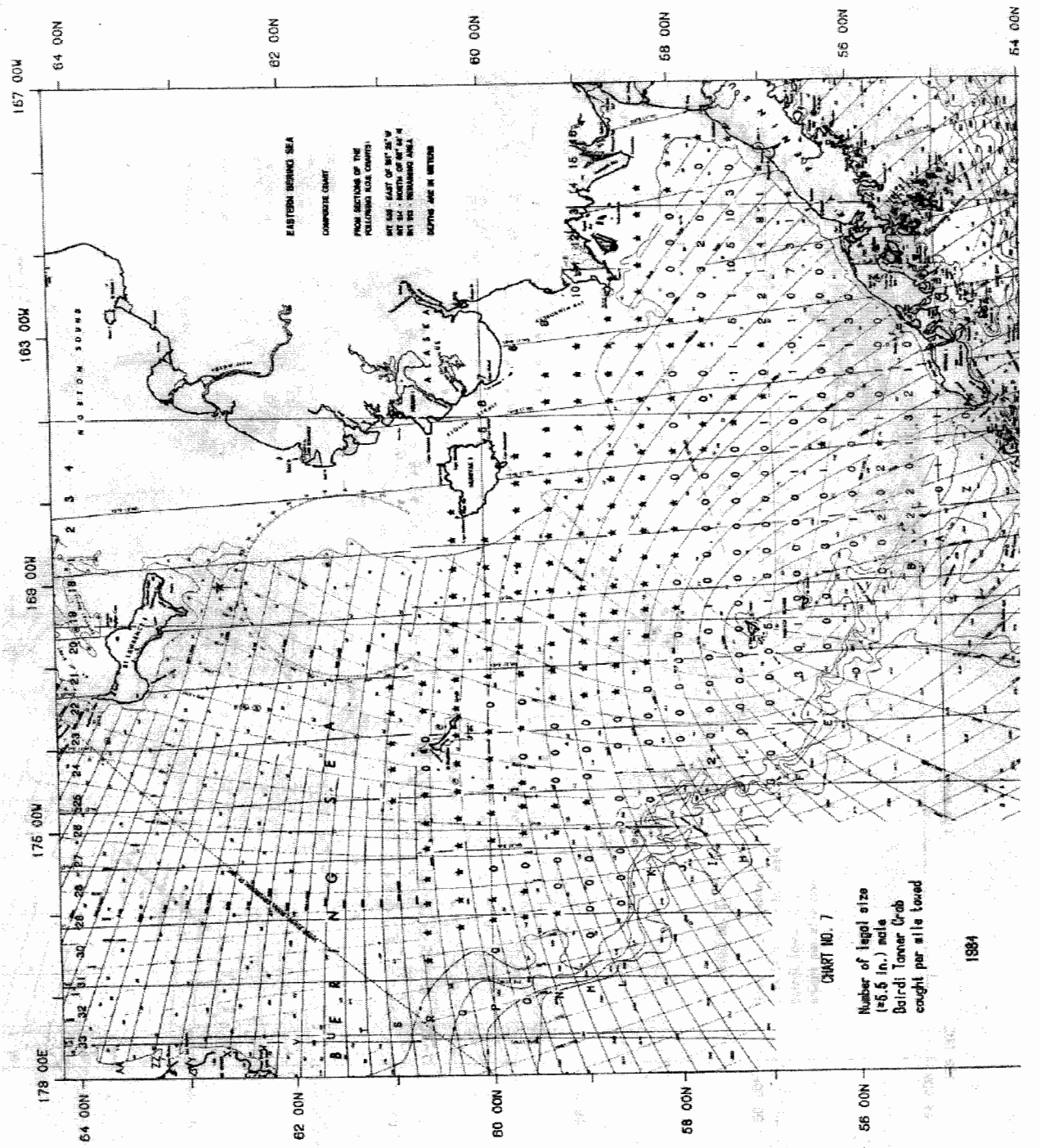


Figure B.3.2.7-6. Number of large male Tanner crab (>138 mm carapace width) caught per square mile in the 1989 NMFS trawl survey.

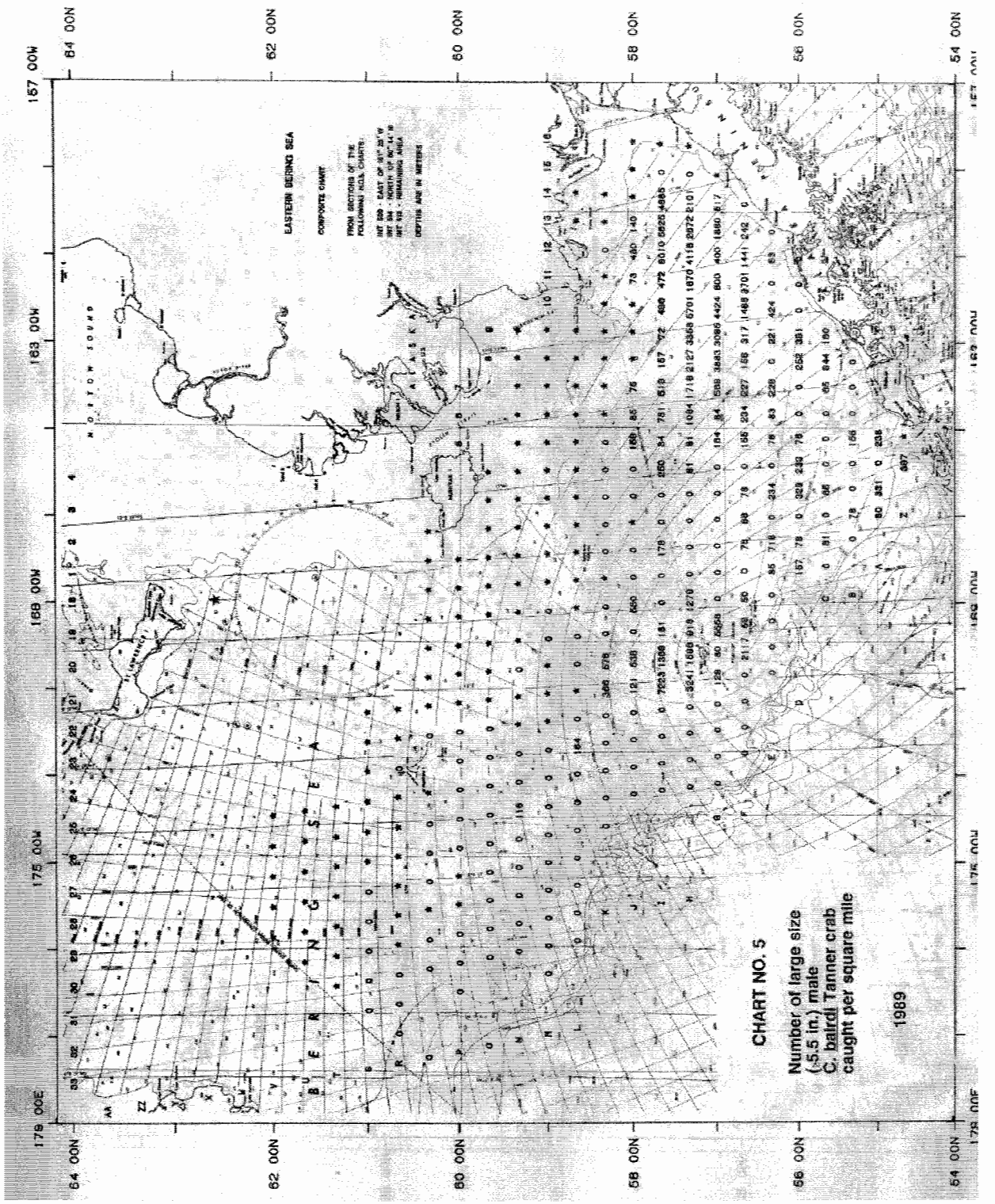


Figure B.3.2.7-7. Number of large male Tanner crab (>138 mm carapace width) caught per square mile in the 1990 NMFS trawl survey.

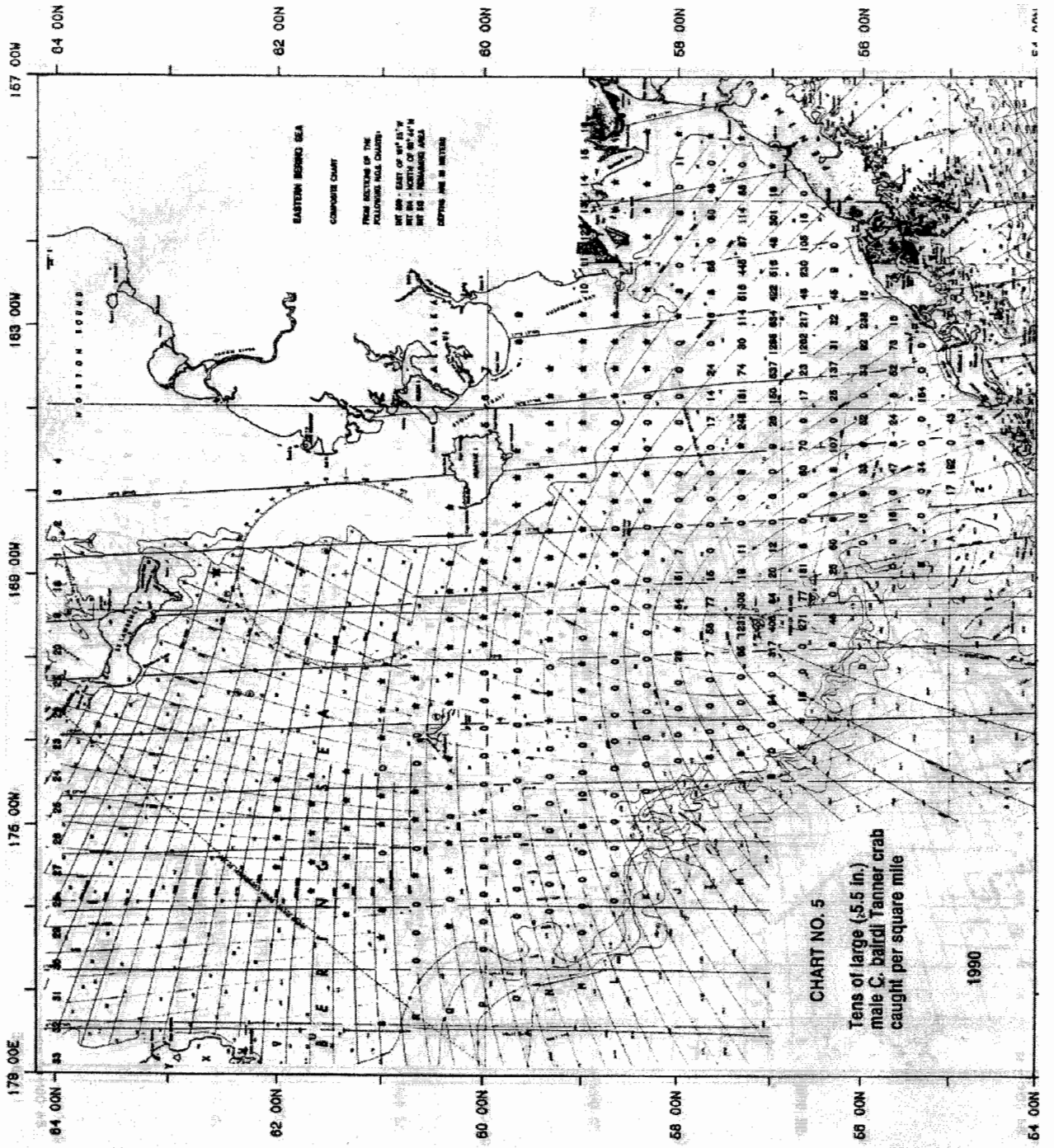


Figure B.3.2.7-8. Number of large male Tanner crab (>138 mm carapace width) caught per square mile in the 1994 NMFS trawl survey.

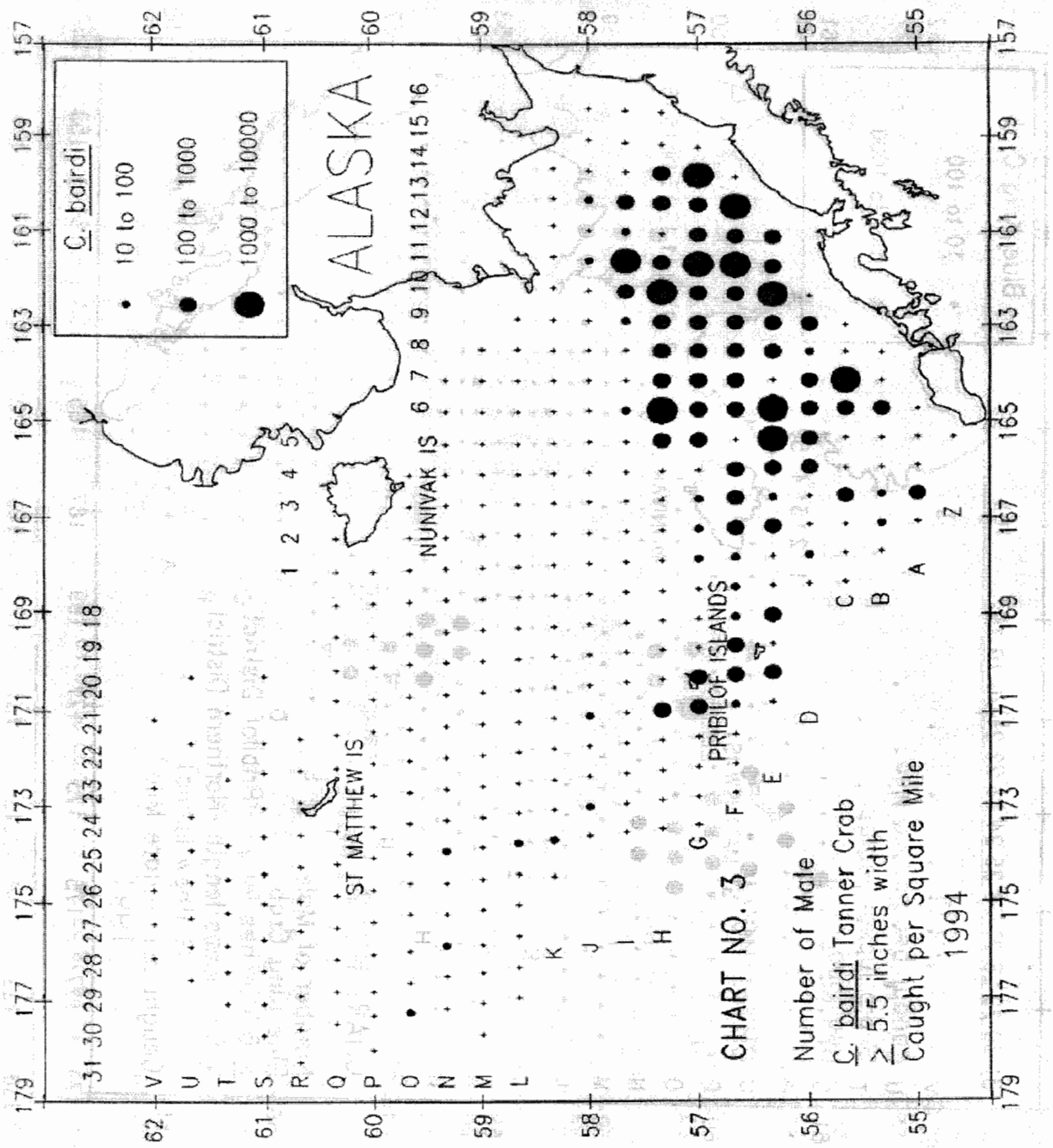


Figure B.3.2.7-9. Survey estimate of total mature biomass of BS Tanner crab (1,000 tons) from 1980 to 2004. Male and female recruits were estimated from a stock assessment model by fertilization year (BSAI Crab SAFE 2003).

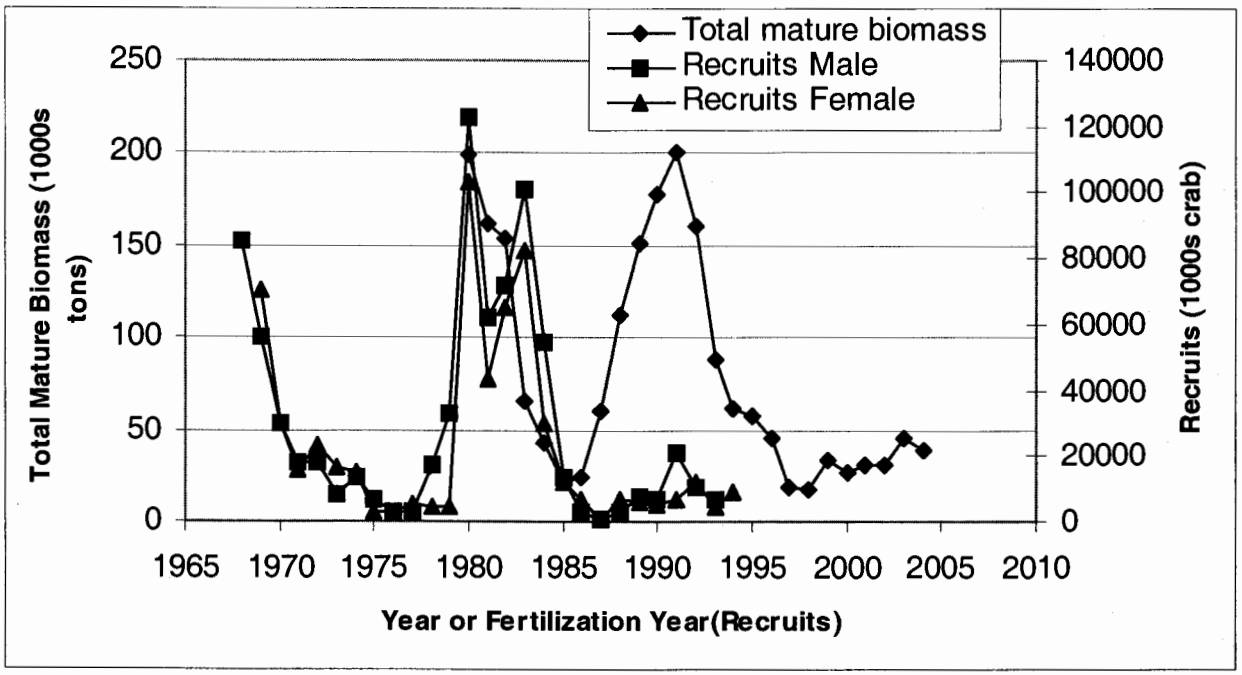


Figure B.3.2.7-10. Number of tows in high and low effects areas in the EBS from 1981 to 2002.

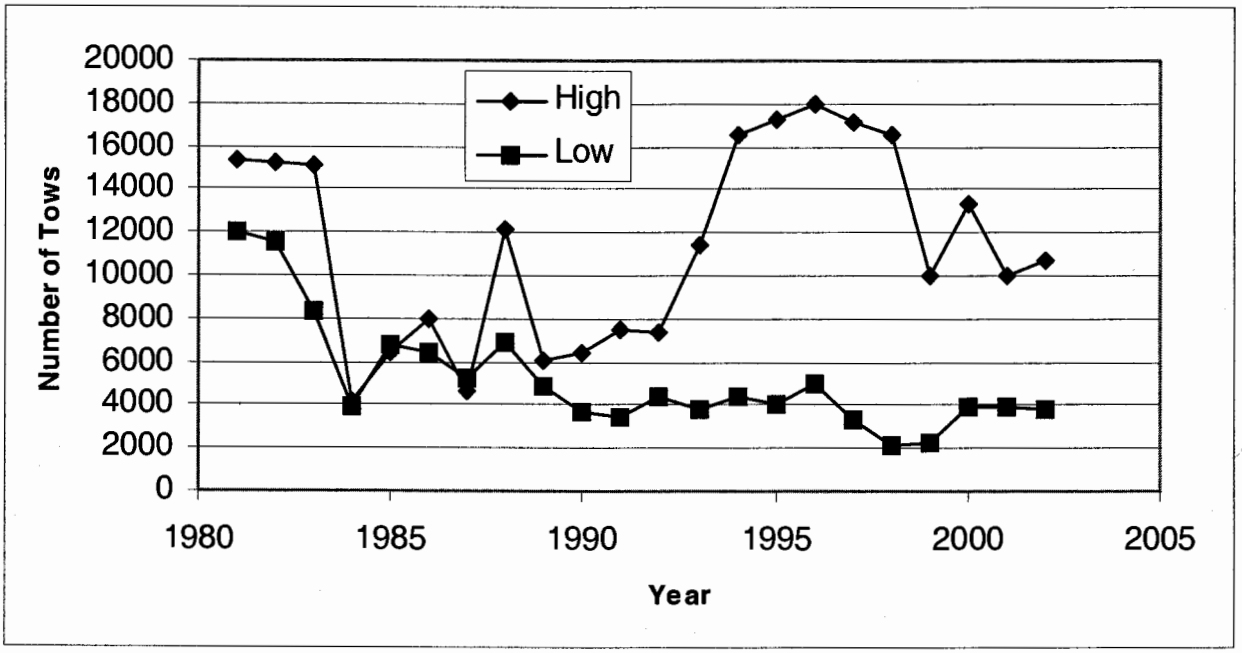
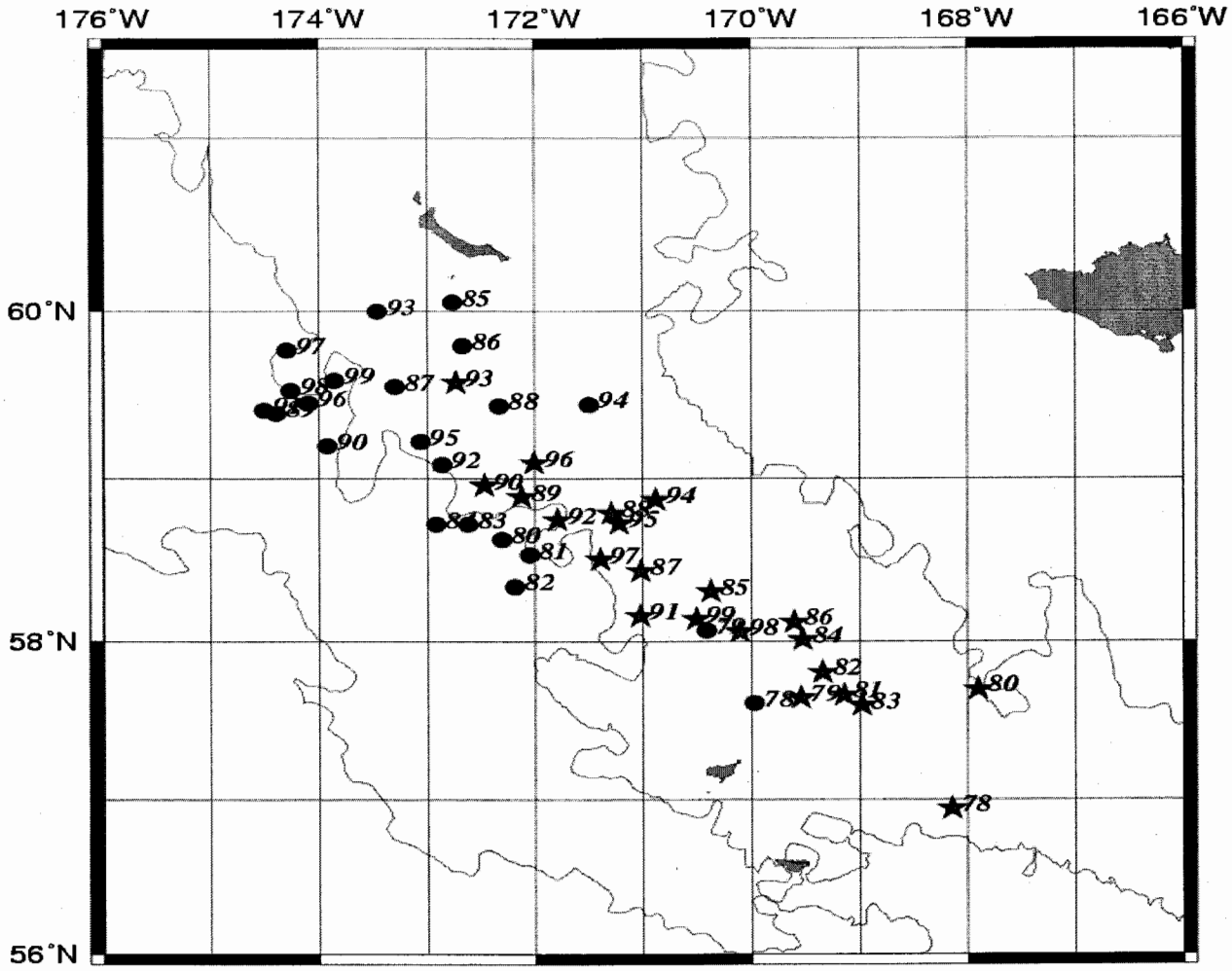


Figure B.3.2.8-1. Centroids of abundance of mature female snow crabs (shell condition 2+) in blue circles and mature males (shell condition 3+) in red stars.



Source: Reprinted from Armstrong, Orensanz, and Ernst (in press).

Figure B.3.2.8-2. 2004 Survey abundance of snow crab females >49 mm (approximately mature abundance) by tow. Abundance is proportional to the area of the circle.

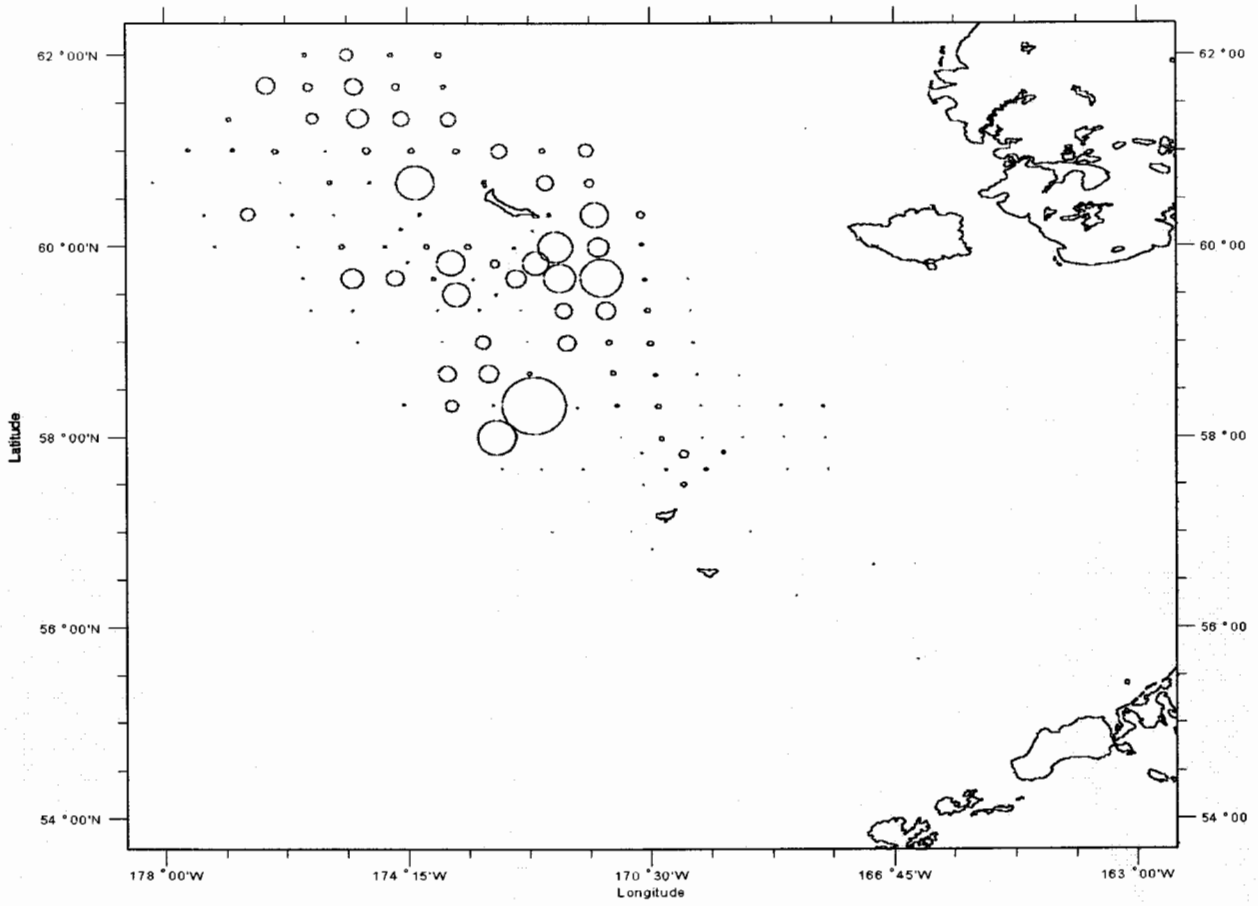


Figure B.3.2.8-3. 2004 Survey abundance of snow crab males >79 mm (approximately mature abundance) by tow. Abundance is proportional to the area of the circle.

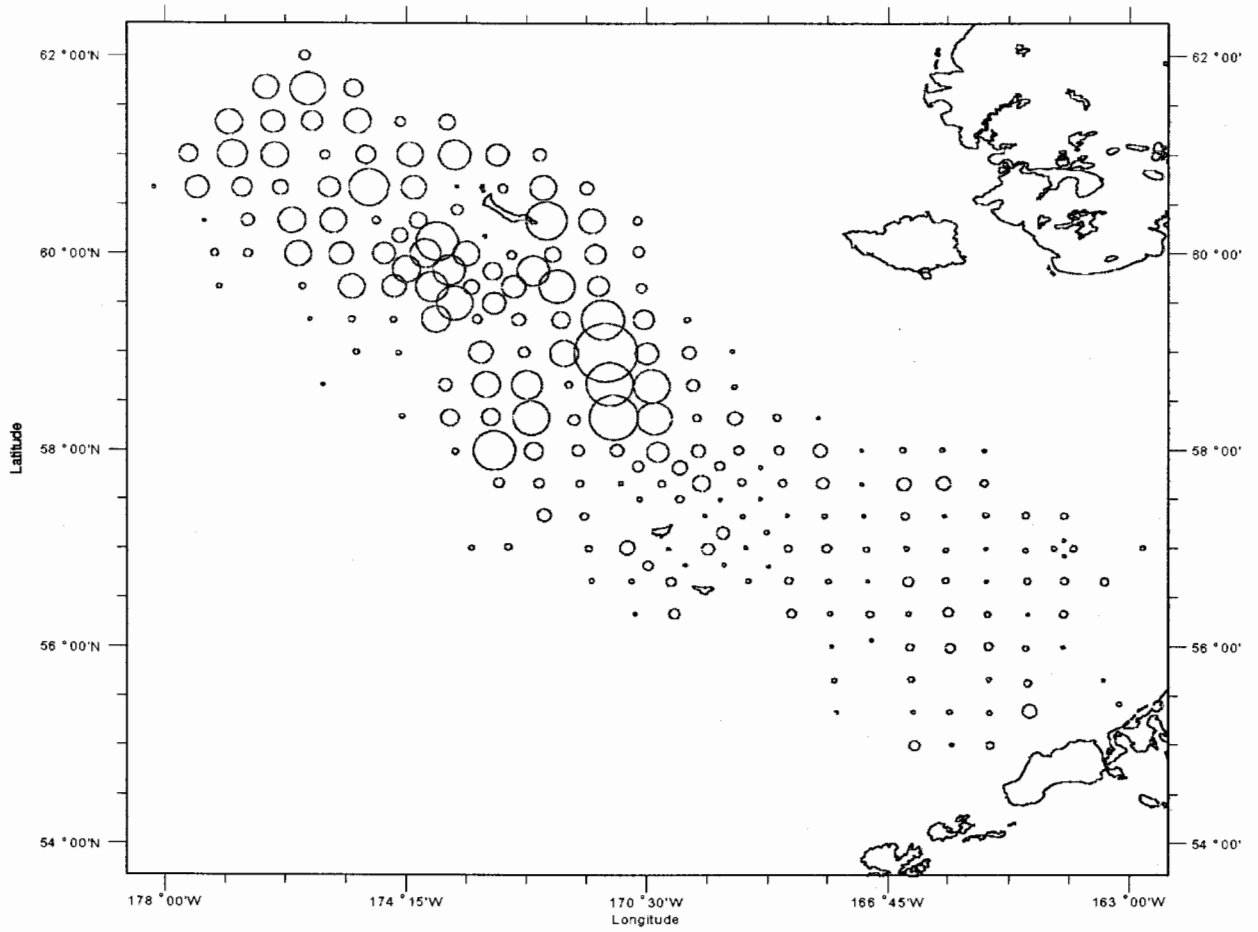
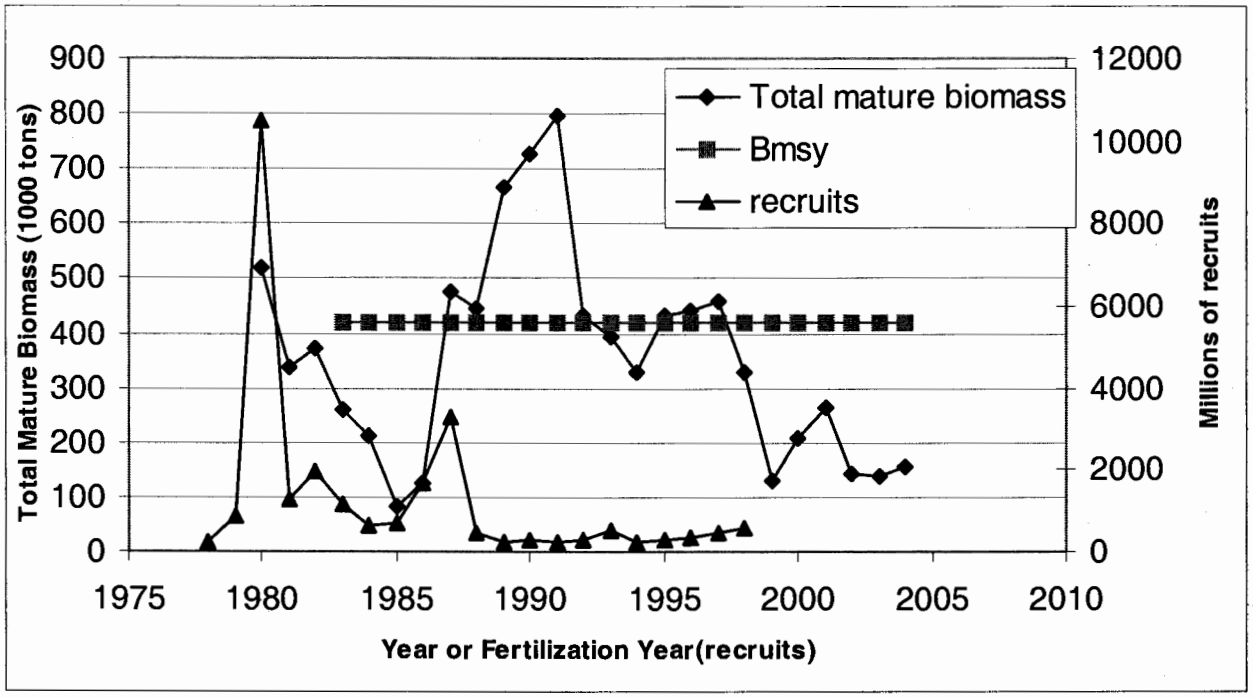


Figure B.3.2.8-4. Survey estimates of total mature biomass of BS snow crab (1,000 tons) from 1980 to 2004 and recruitment by fertilization year from stock assessment model.



Source: Turnock 2004.

Figure B.3.3.1-1. Mean log (CPUE +1) from summer bottom trawl surveys in the BSAI and the GOA by high, low, and no effort areas.

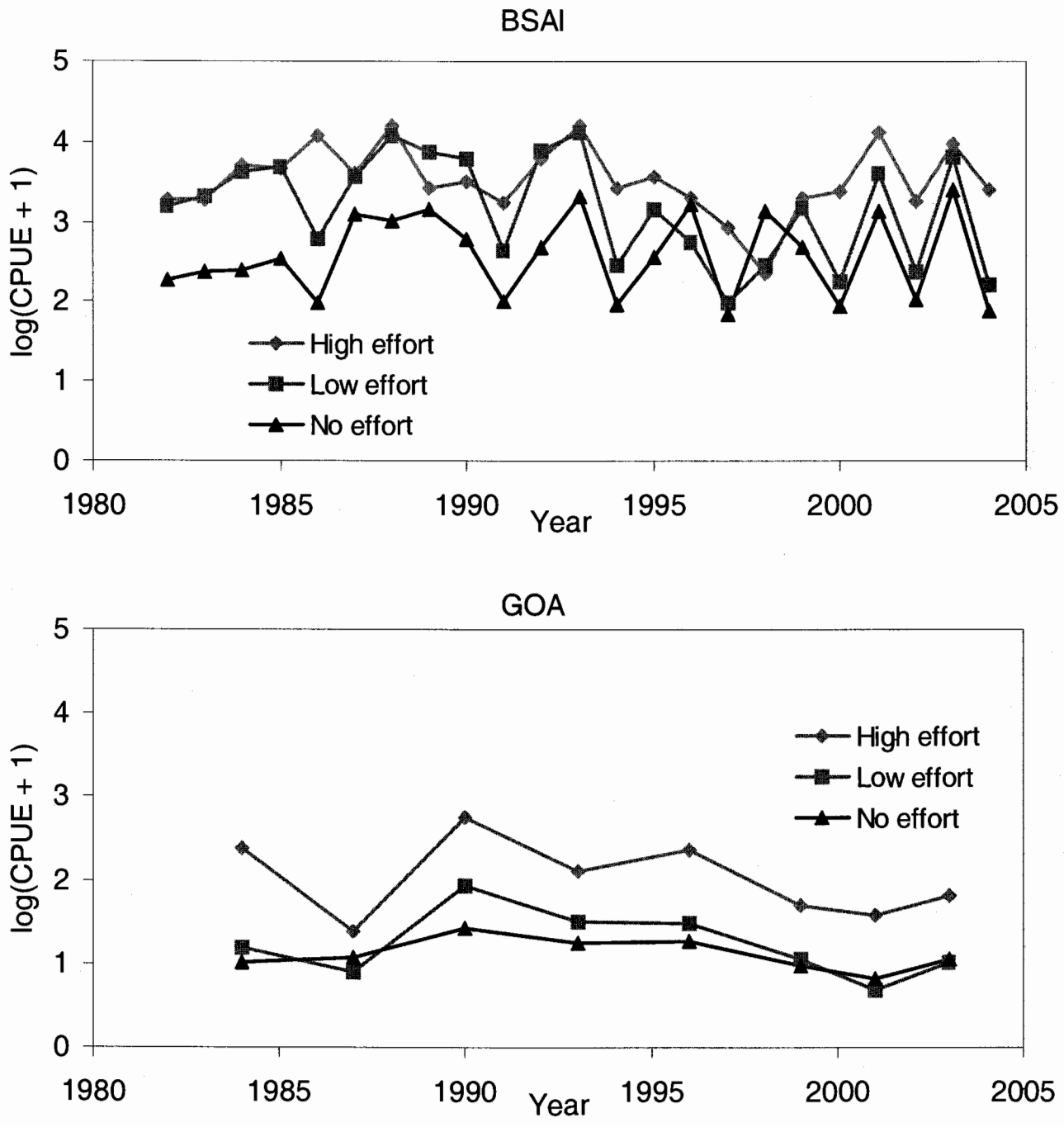
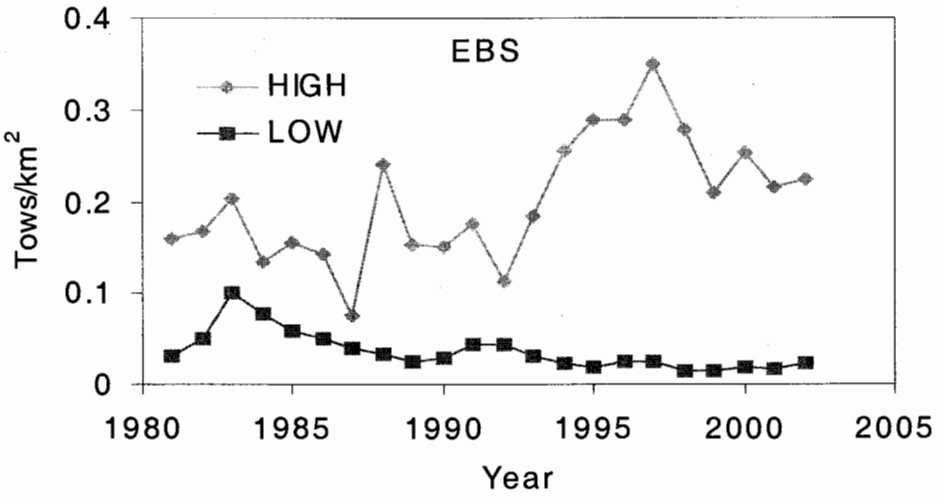
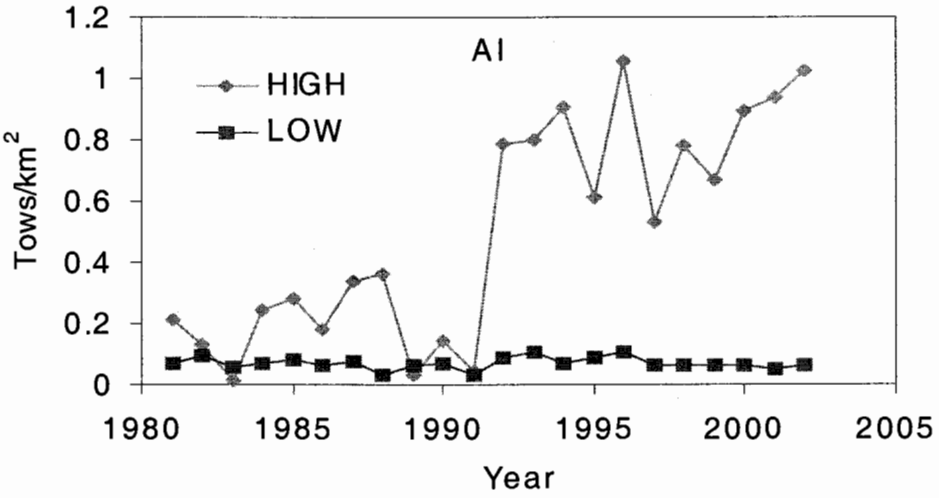


Figure B.3.3.1-2. Non-pollock fishing effort (tows/km^2) from 1981 to 2002 in areas designated as high and low effort areas in the GOA, AI, and BS based on the 5-year period from 1998 to 2002.





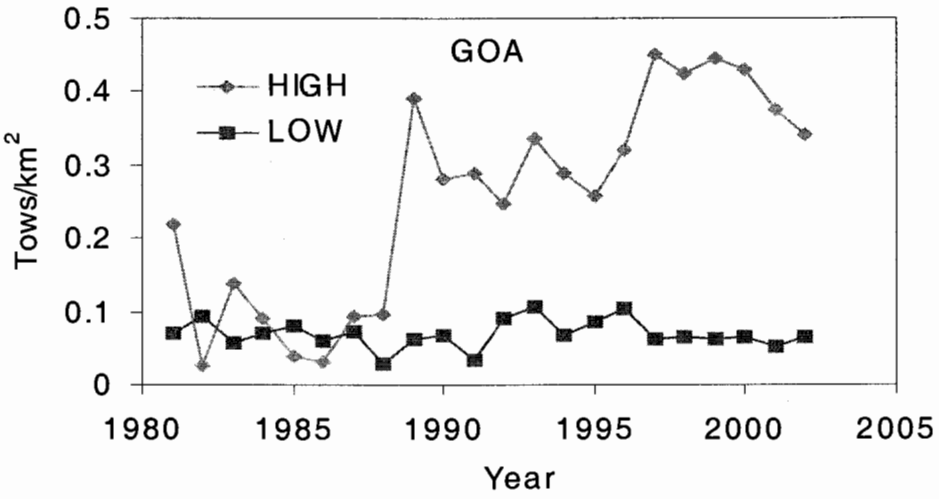


Figure B.3.3.1-3. Box plots of weight residuals (deviations from mean weight by length and sex) for high-effort (red, left) and low-effort areas (blue, right) by year and region.

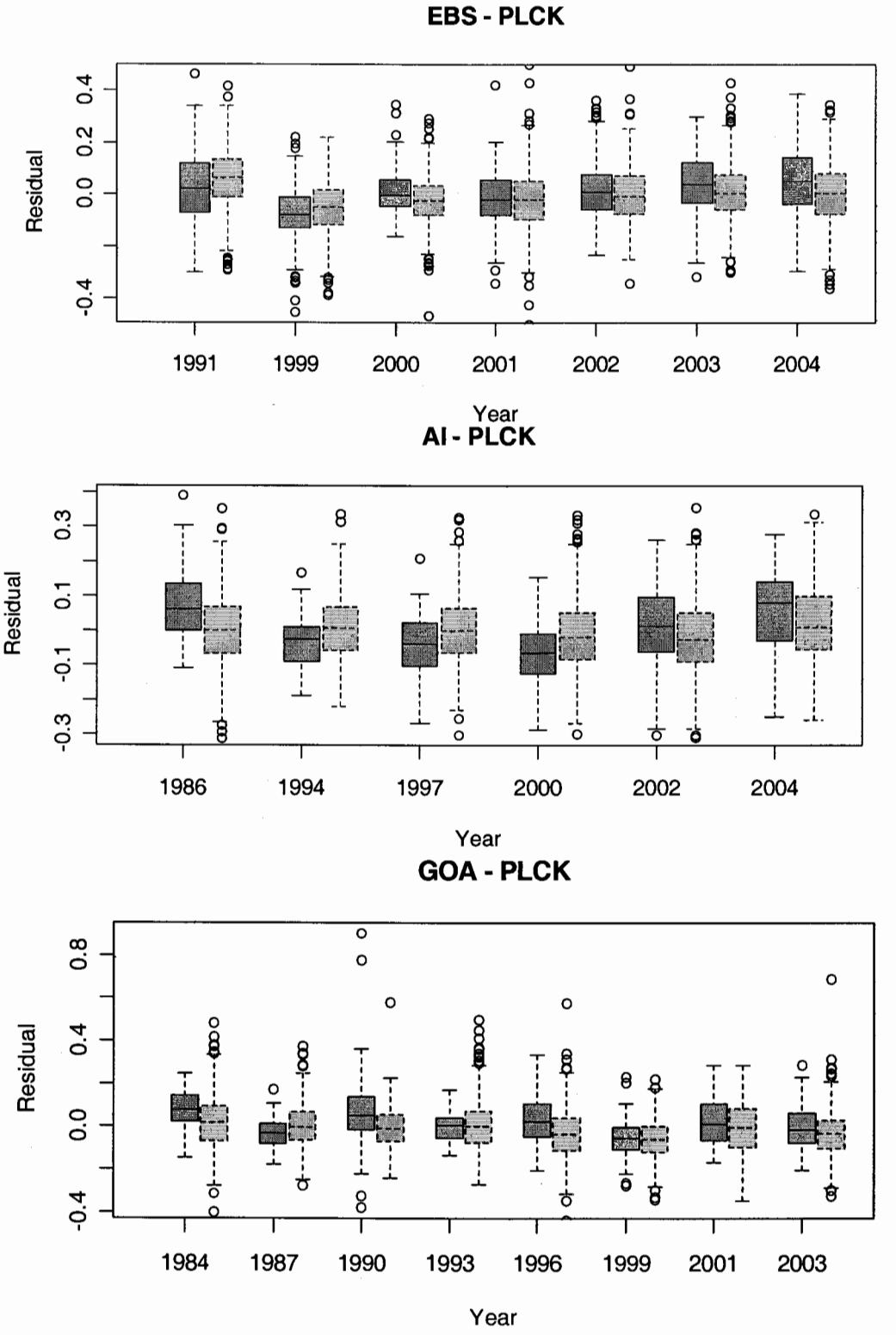


Figure B.3.3.1-4. GOA pollock spawning biomass (million tons [t], top) and age 2 recruitment (billions of fish, bottom) from 1961 to 2005. Vertical bars represent two standard deviations. The $B_{35\%}$ and $B_{40\%}$ lines represent the current estimates of these benchmarks.

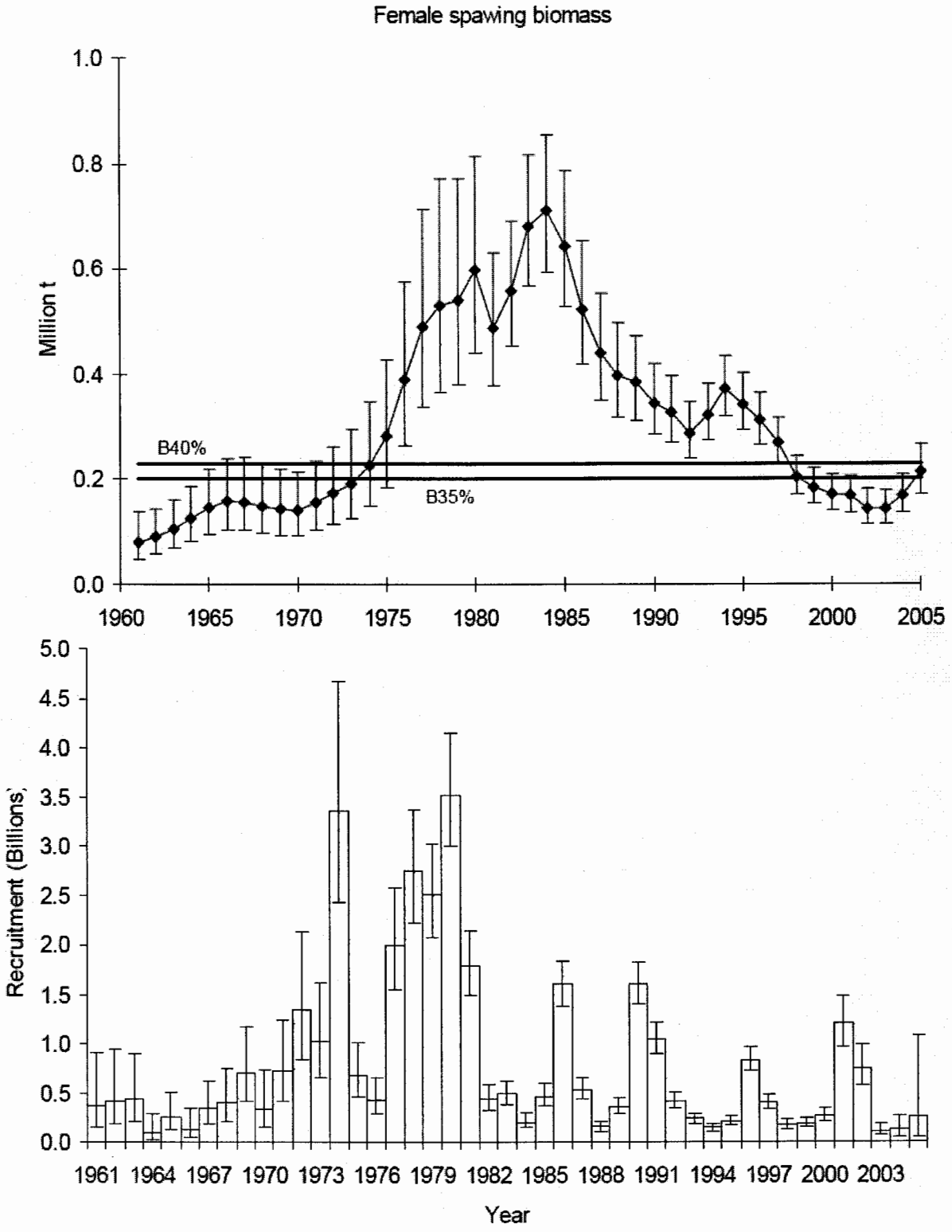
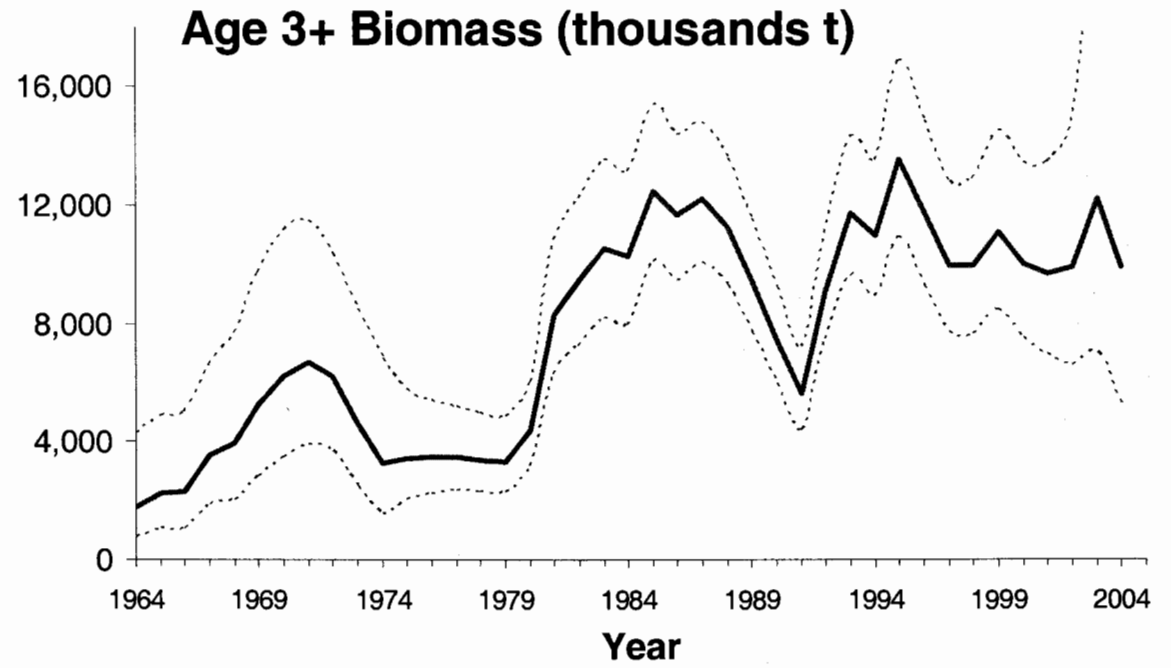


Figure B.3.3.1-5. EBS pollock stock biomass (thousands of t, top) and age-1 recruitment (million of fish, bottom) from 1961 to 2005. Vertical bars represent two standard deviations.



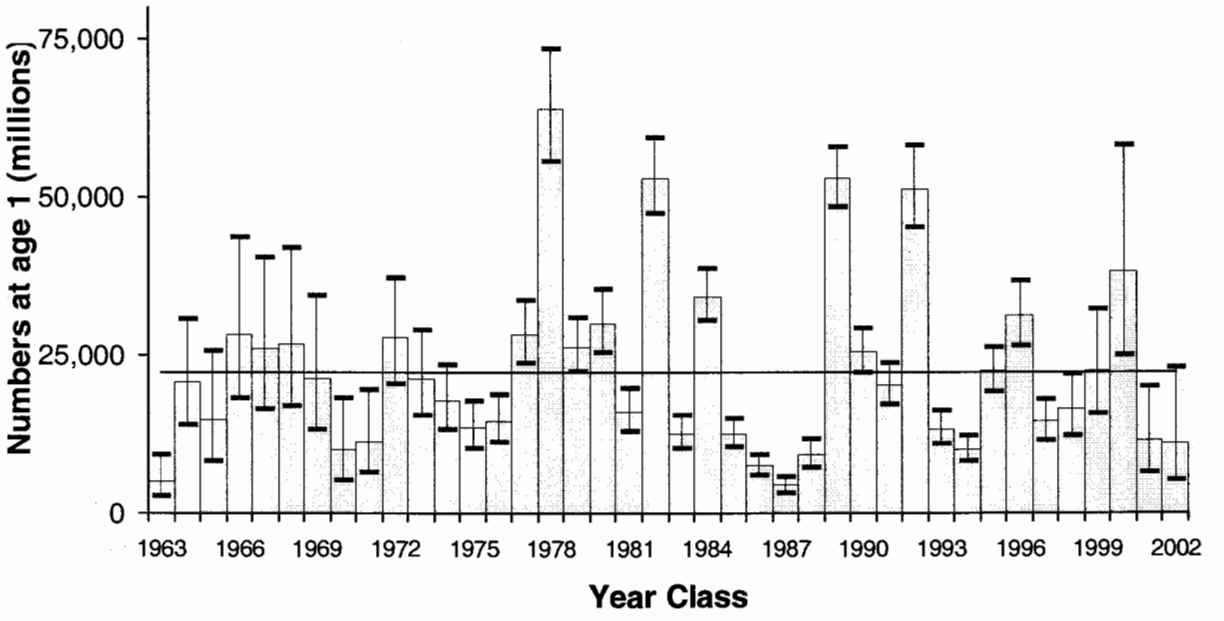


Figure B.3.3.3-1. Retrospective estimates of 40 percent biomass via three alternative averaging methods.

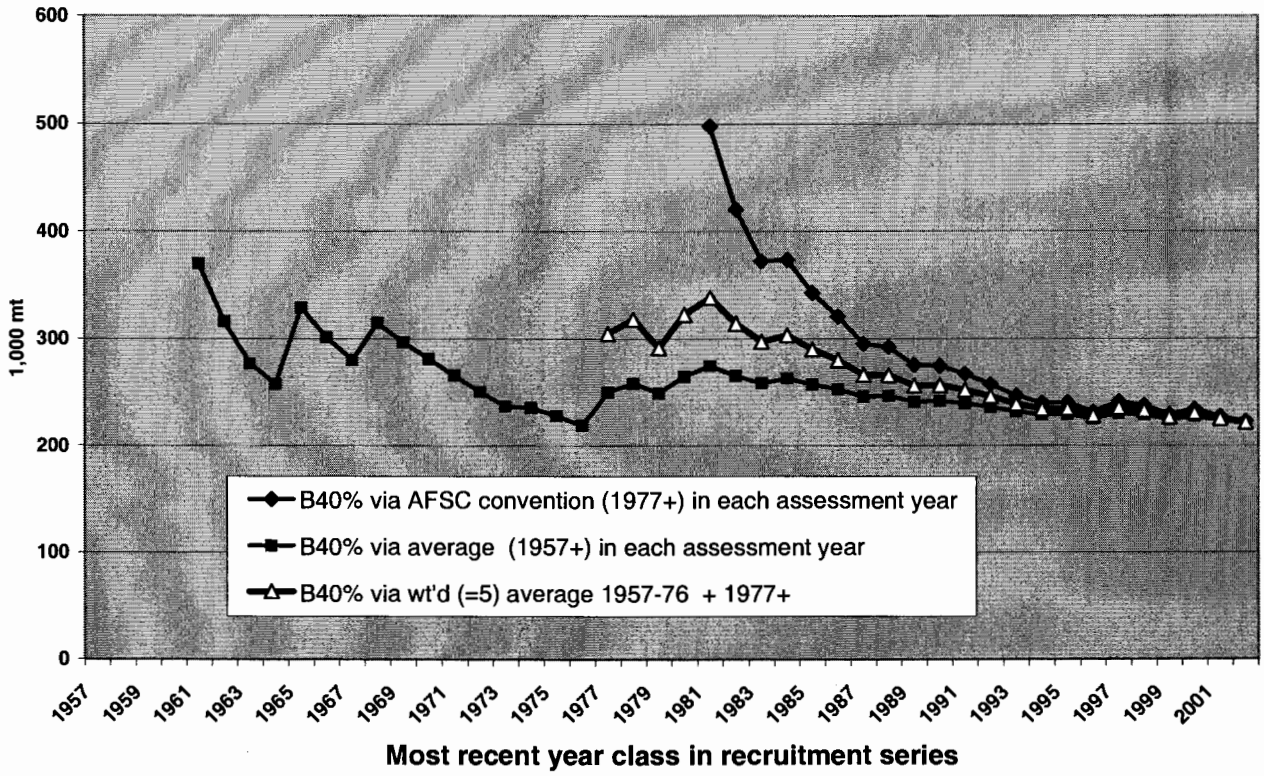


Figure B.3.3.5-1. Yellowfin sole (BSAI): grams epifauna/grams predator and 95 percent confidence interval.

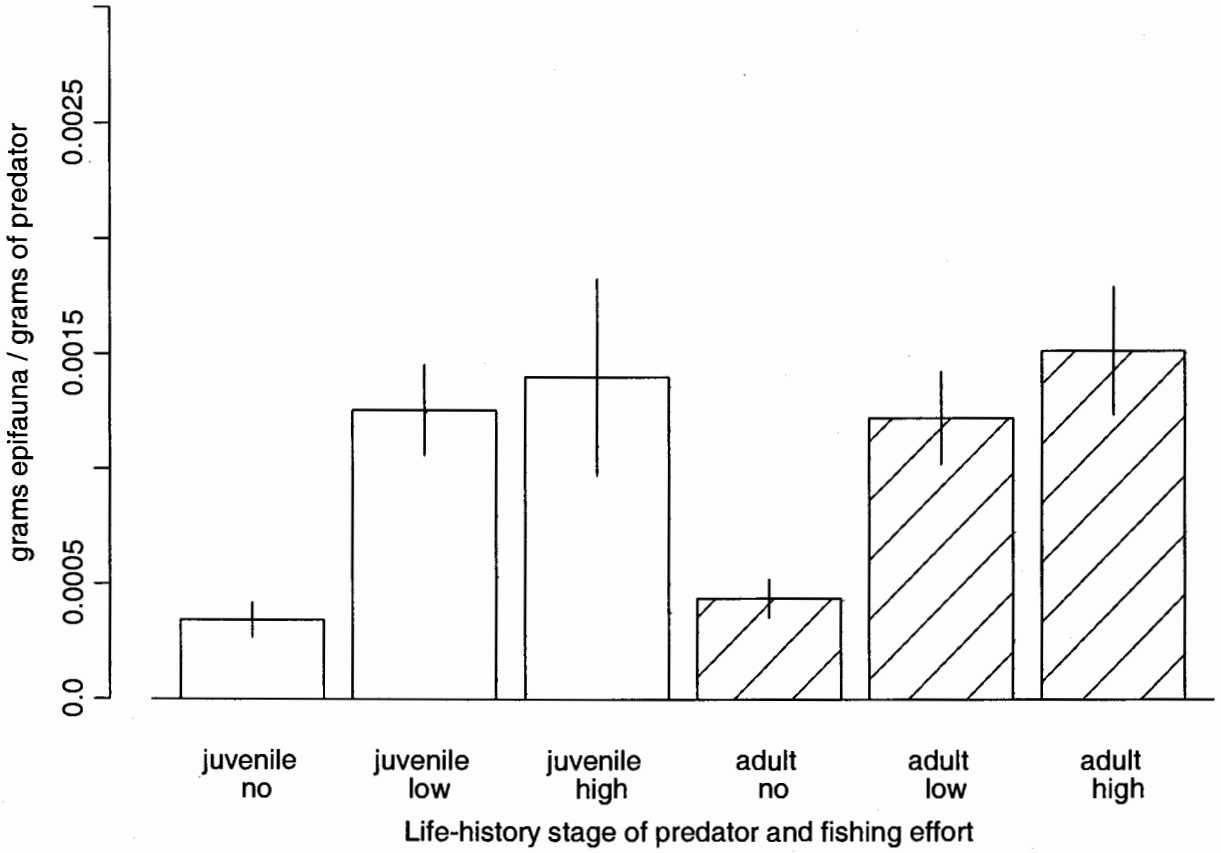


Figure B.3.3.5-2. Yellowfin sole (BSAI): grams infauna/grams predator and 95 percent confidence interval.

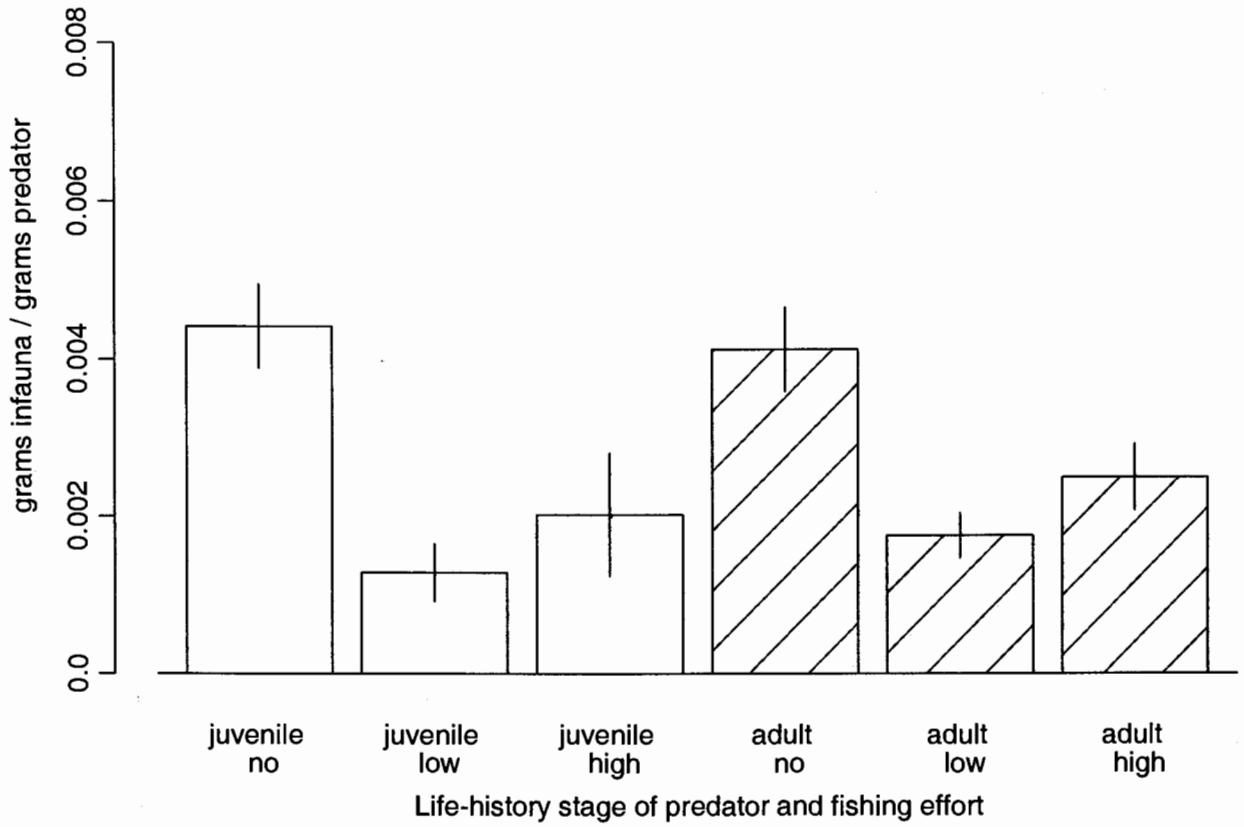


Figure B.3.3.5-3. Stock assessment model results of recruitment, female stock spawning biomass, B_{MSY}, and total stock biomass.

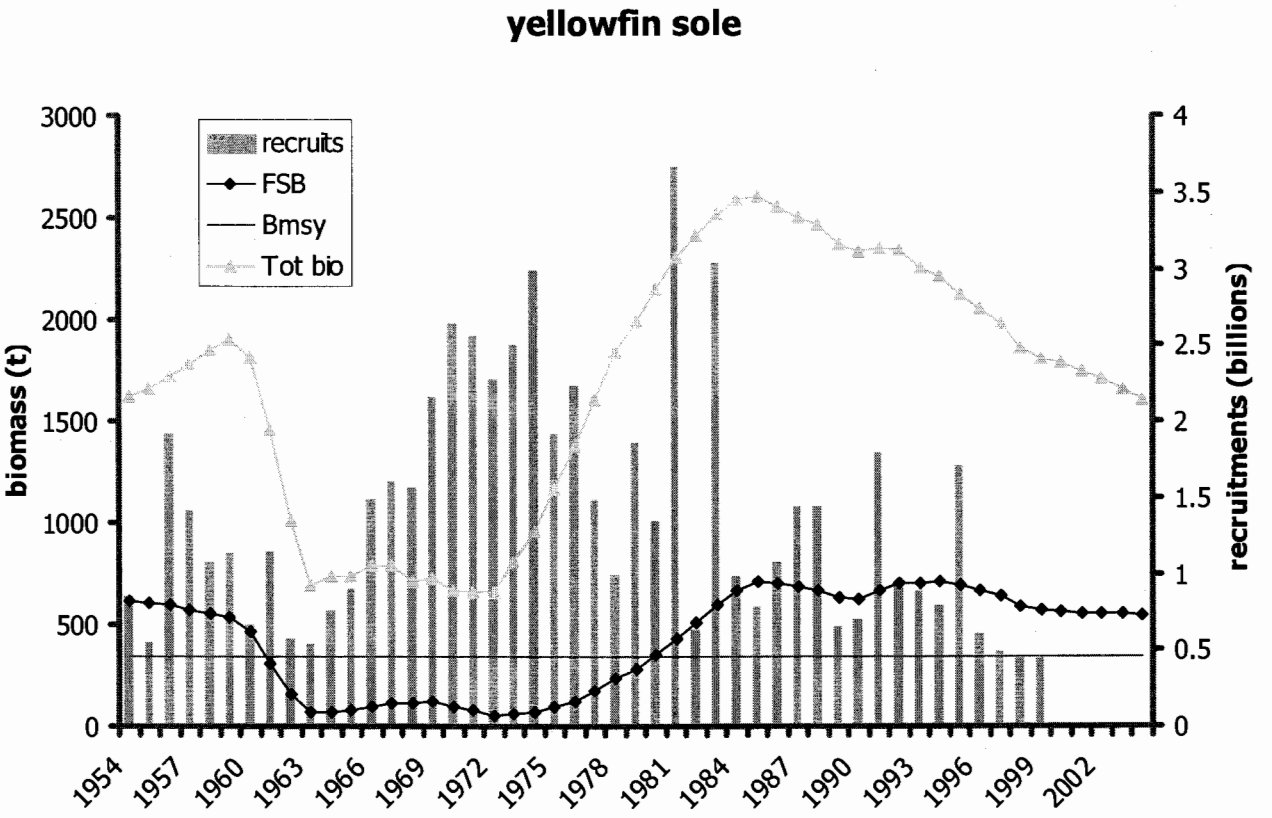


Figure B.3.3.6-1. Estimates of Greenland turbot catch, year class at age 1, and biomass of age 1+ fish.

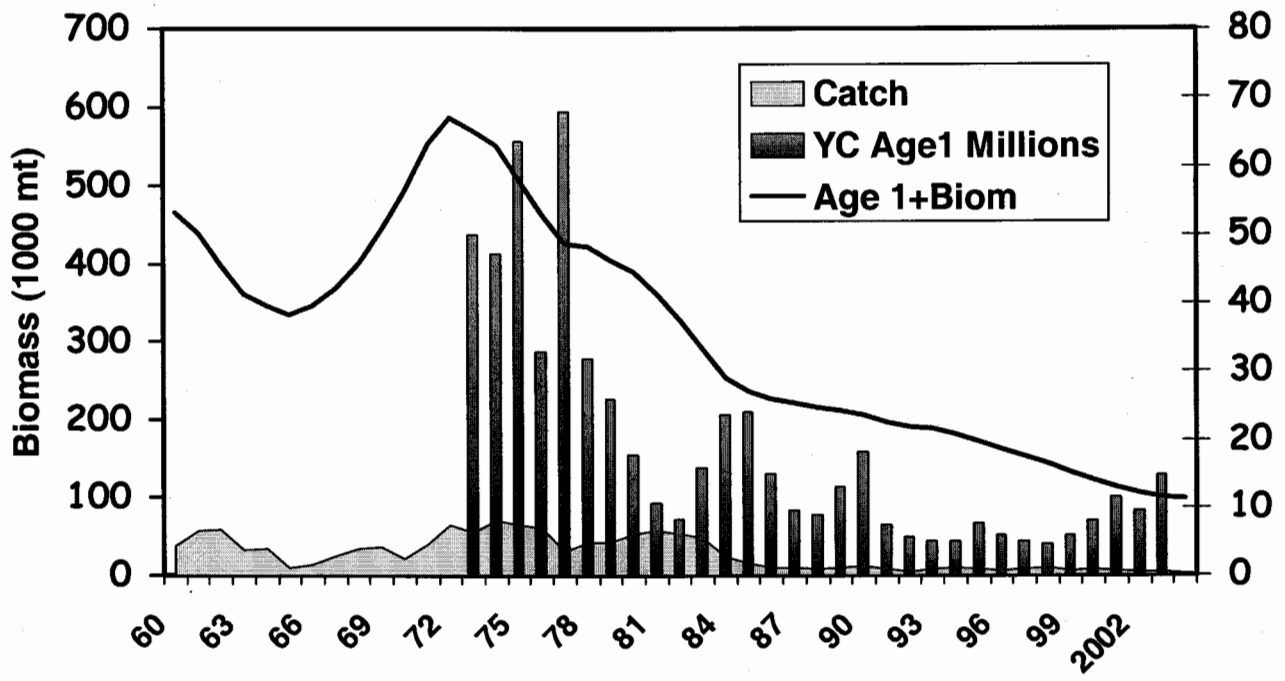


Figure B.3.3.7-1. Arrowtooth flounder (GOA) female length at age.

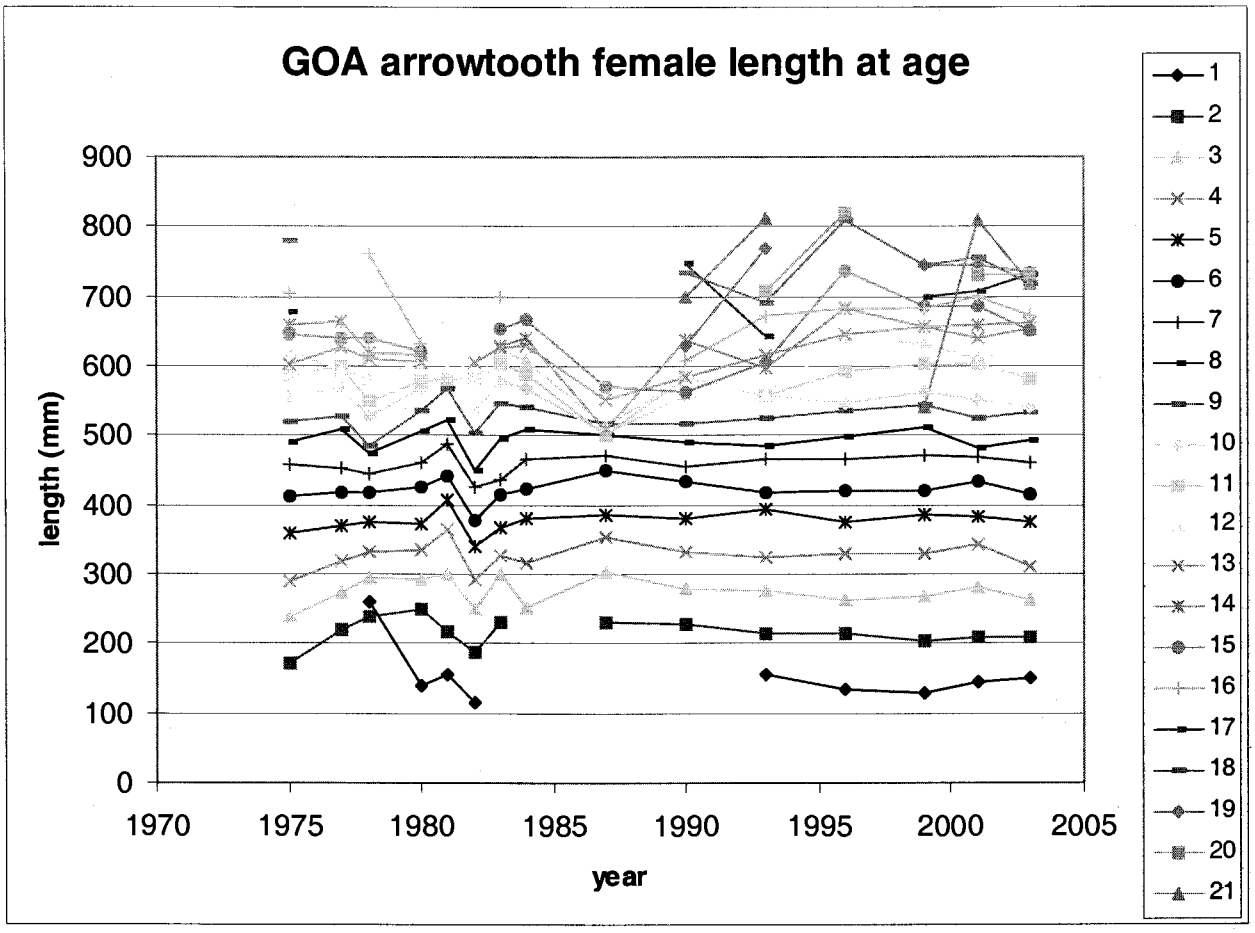


Figure B.3.3.7-2. Arrowtooth flounder (GOA) male length at age.

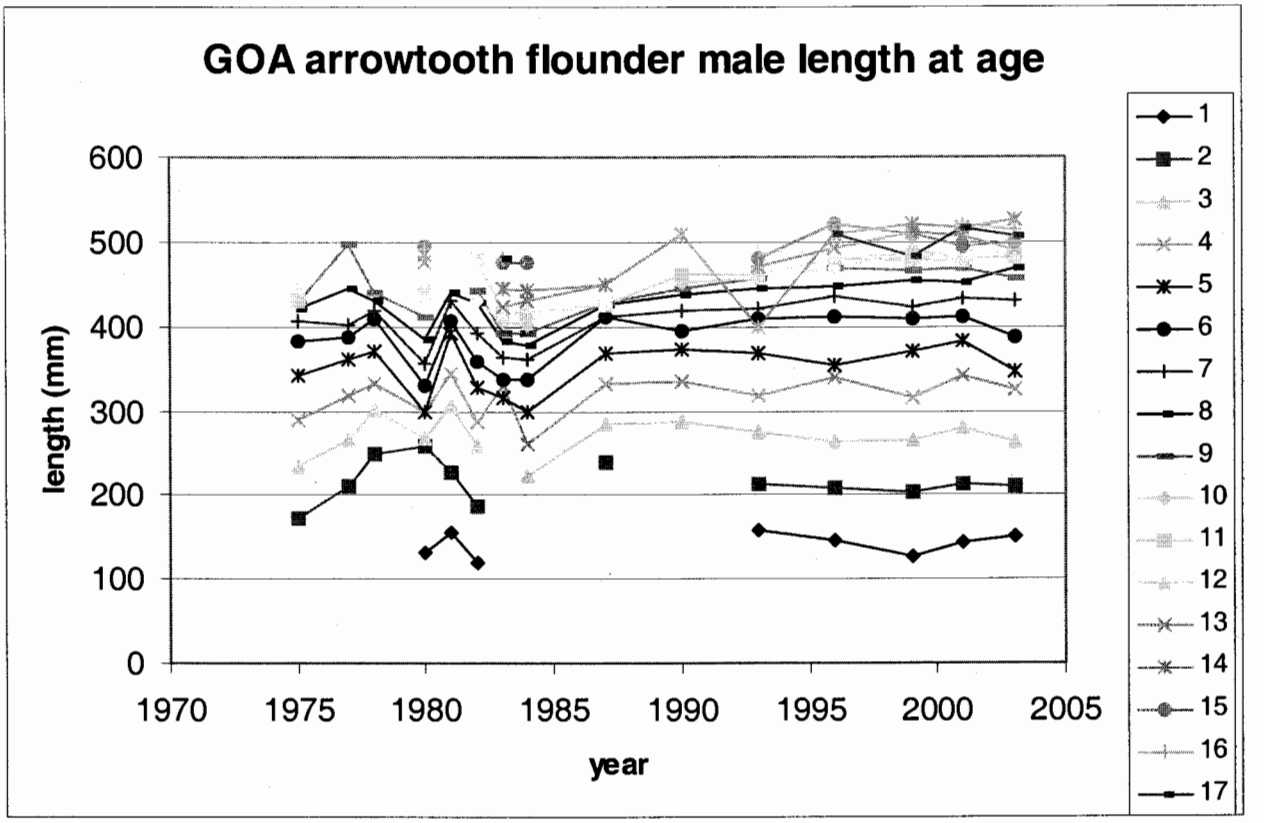


Figure B.3.3.7-3. Stock assessment model results of recruitment, total biomass, female spawning biomass, and the 35 percent biomass level.

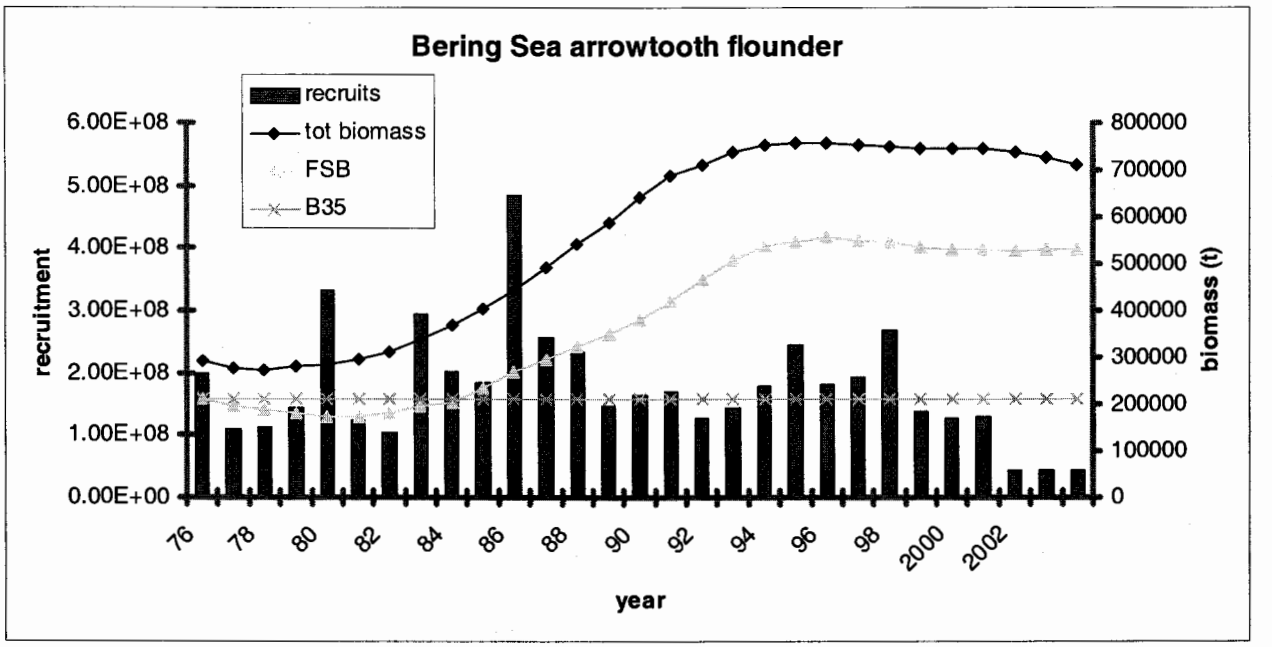


Figure B.3.3.8-1. Northern rock sole: grams epifauna/grams predator and 95 percent confidence intervals.

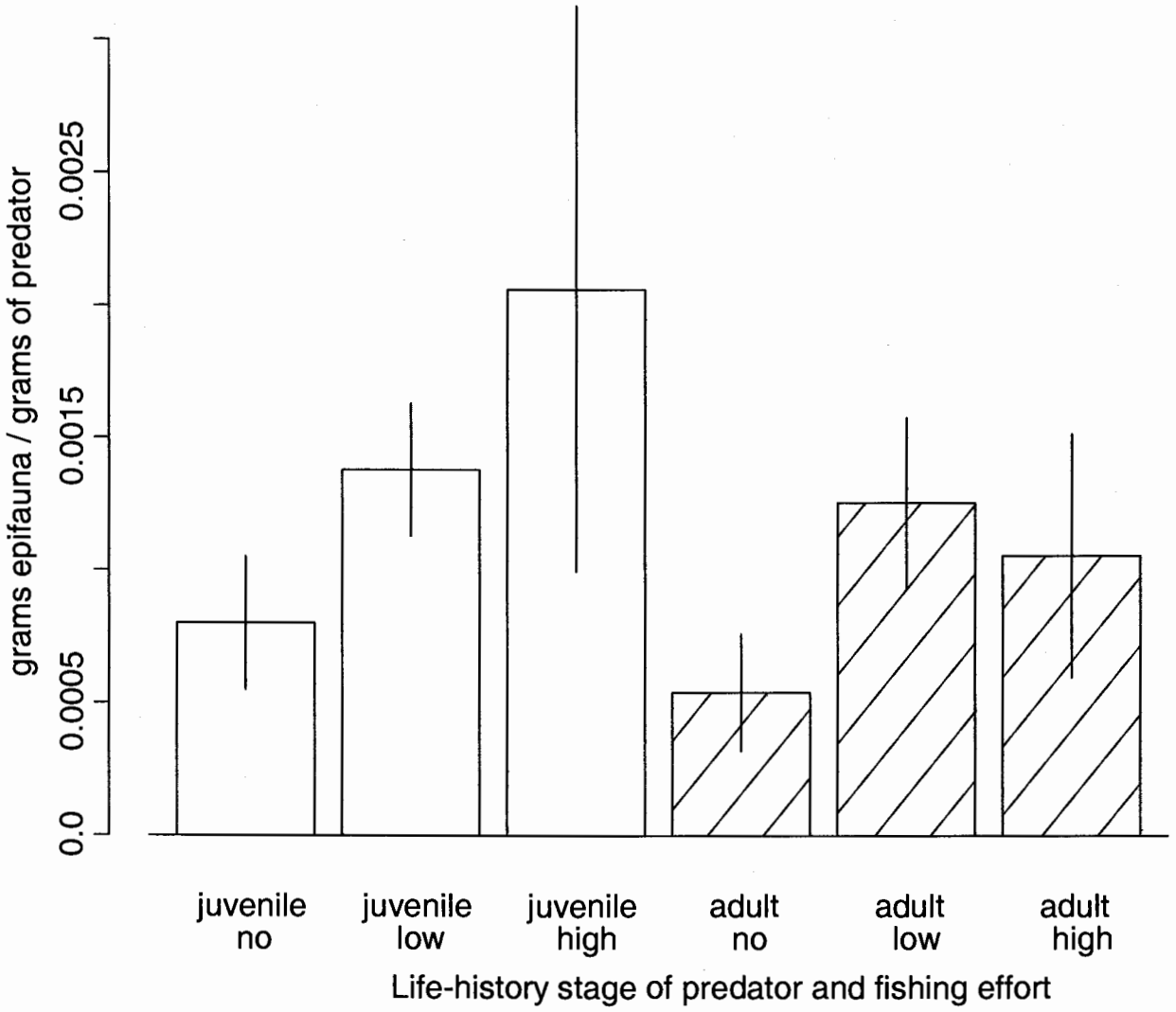


Figure B.3.3.8-2. Northern rock sole: grams infauna/grams predator and 95 percent confidence intervals.

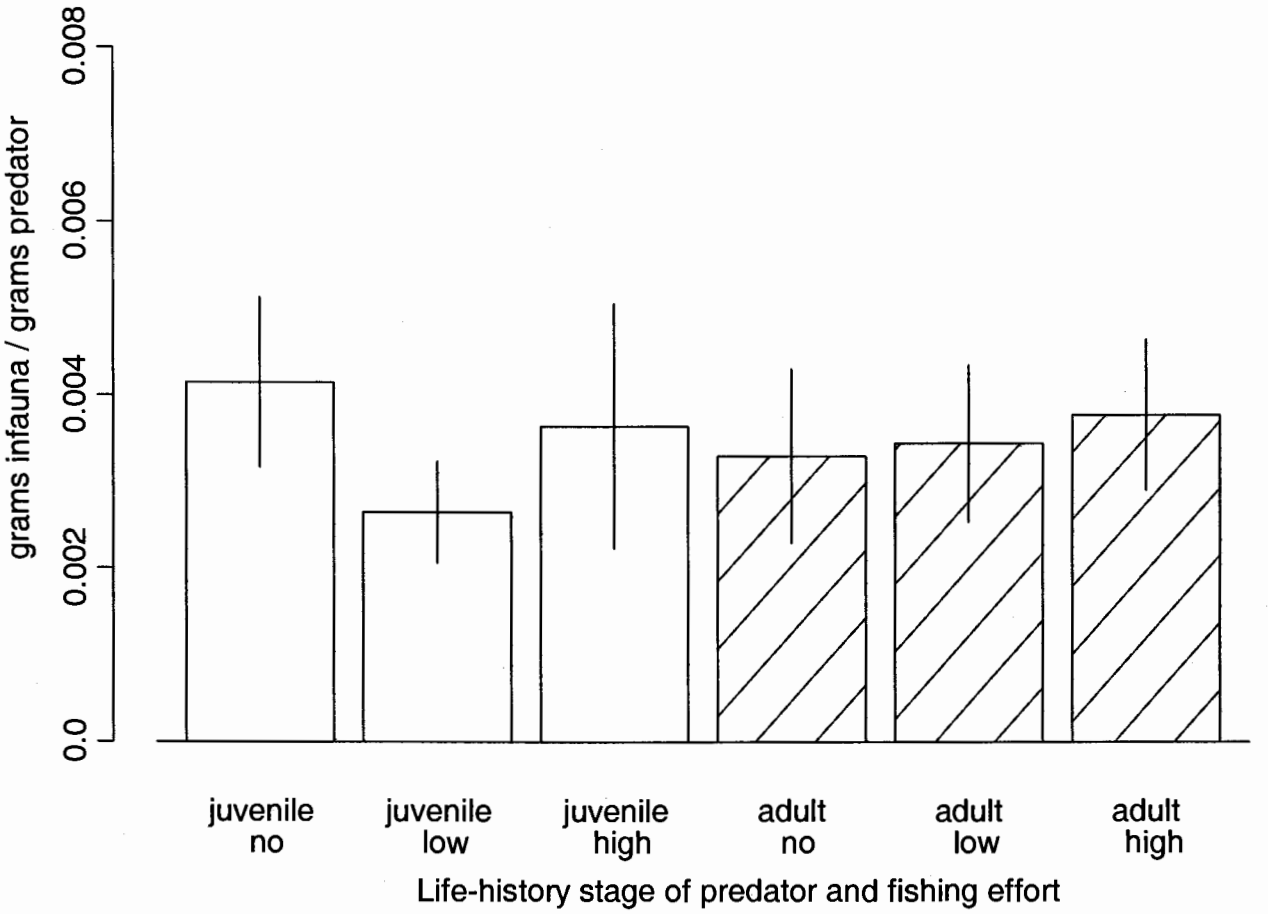


Figure B.3.3.8-3. Rock sole stock assessment model results of total biomass, female spawning biomass, 35 percent biomass stock level, and number of recruits.

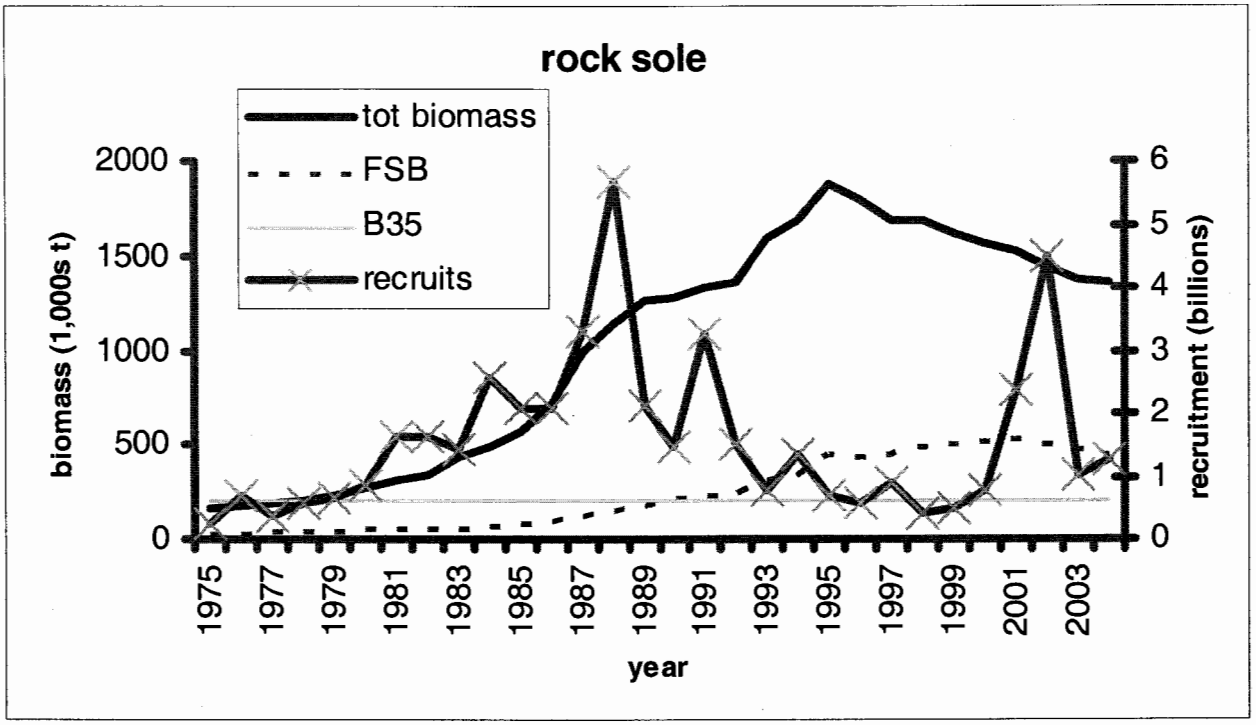


Figure B.3.3.9-1. Flathead sole: proportion with epifauna.

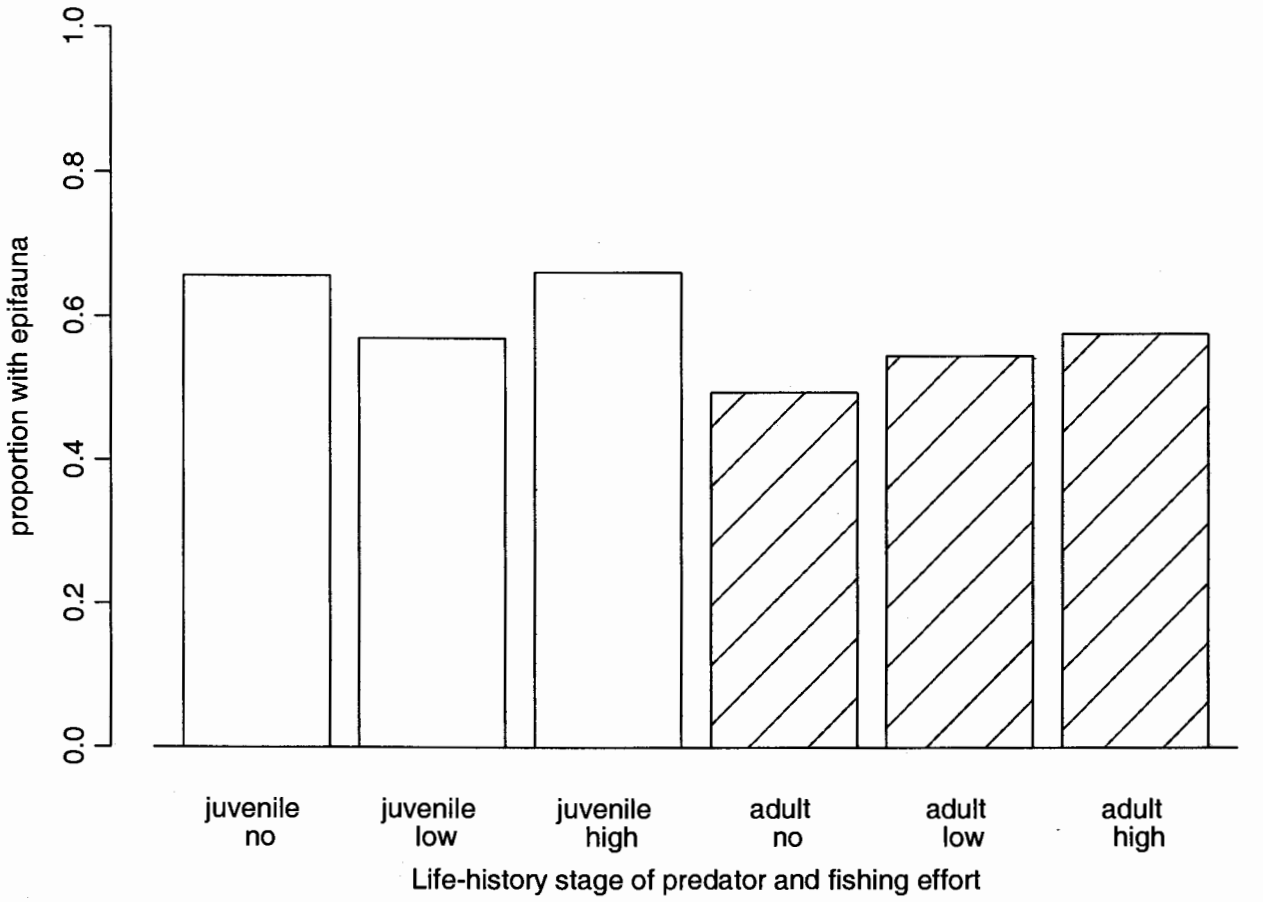


Figure B.3.3.9-2. Flathead sole: proportion with infauna.

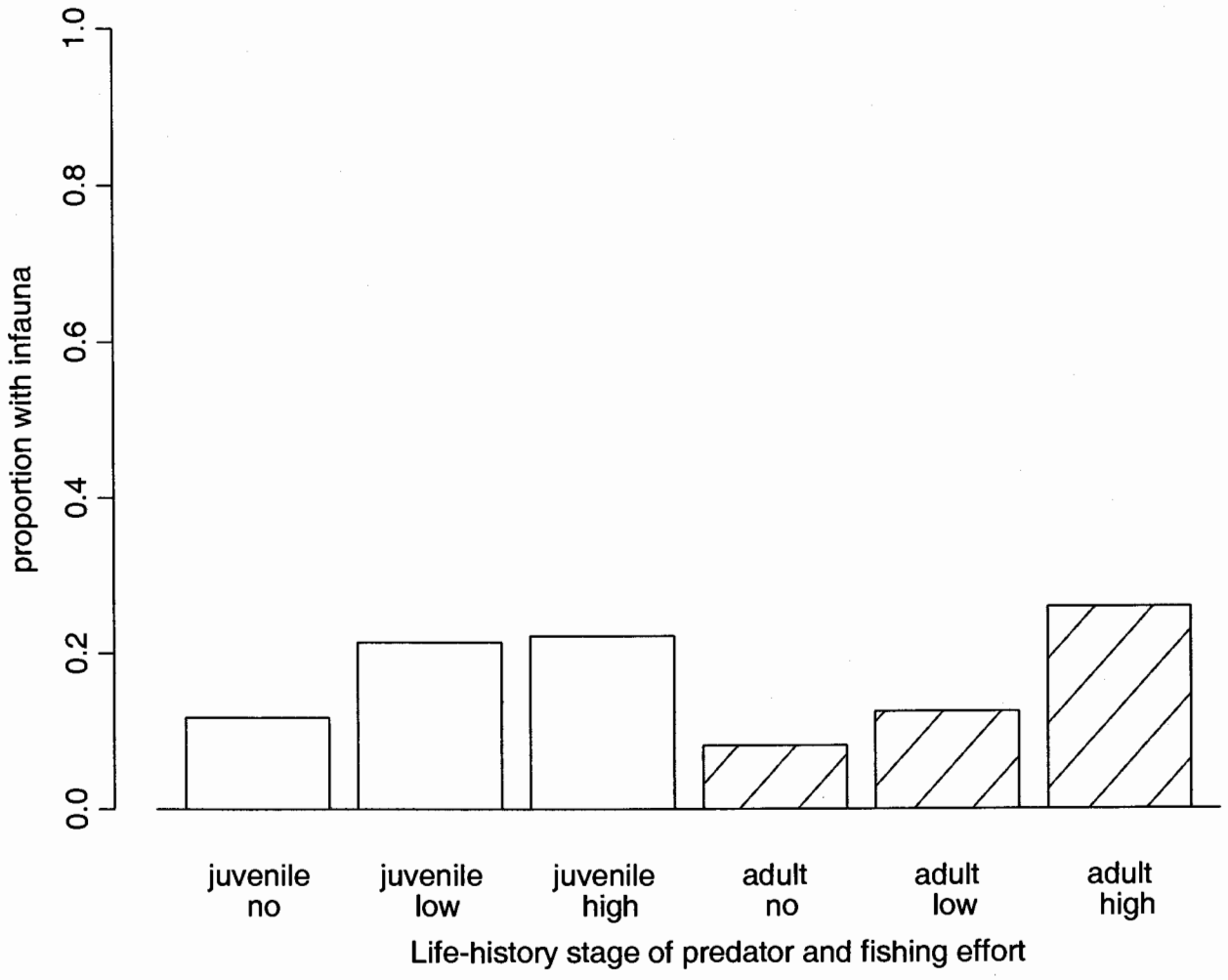


Figure B.3.3.9-3. Stock assessment model results of recruitment, the 35 percent biomass level, spawning biomass, and total biomass.

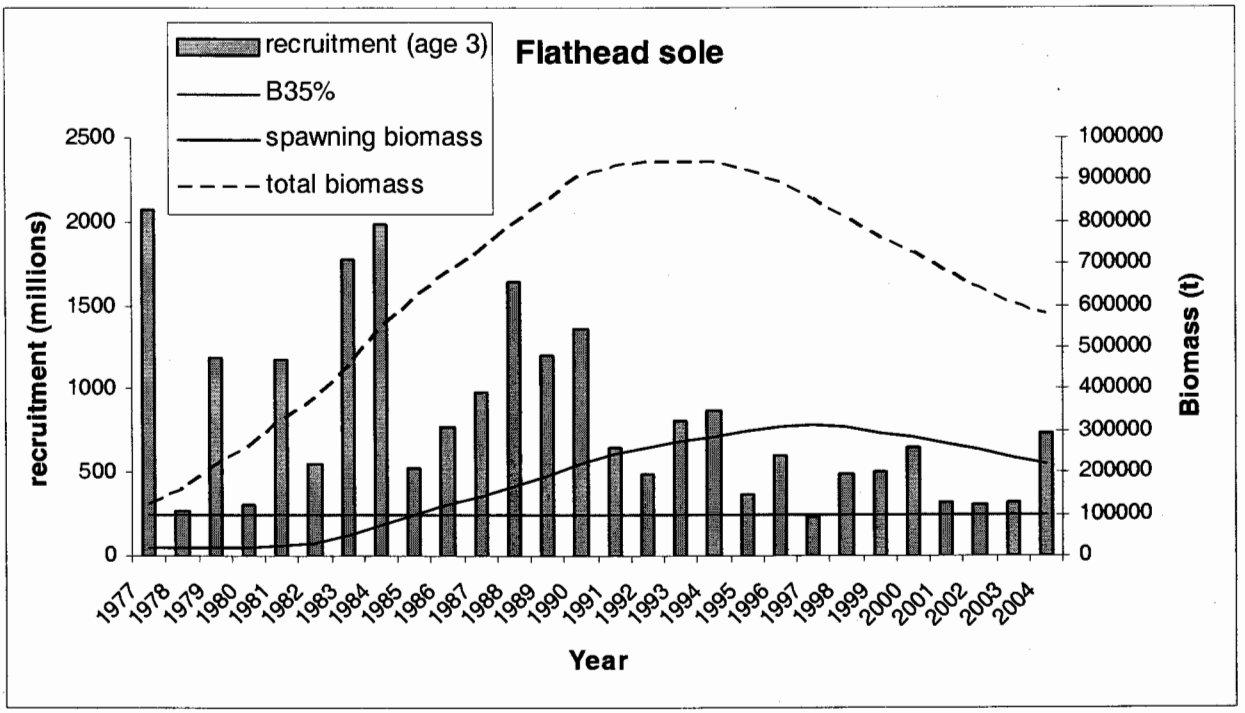


Figure B.3.3.10-1. GOA flathead sole stock assessment model results of age 3+ biomass and catch. The projected 2004 female spawning biomass is estimated at 109,980 t, well above the B_{MSY} level for this stock estimated at 47,700 t.

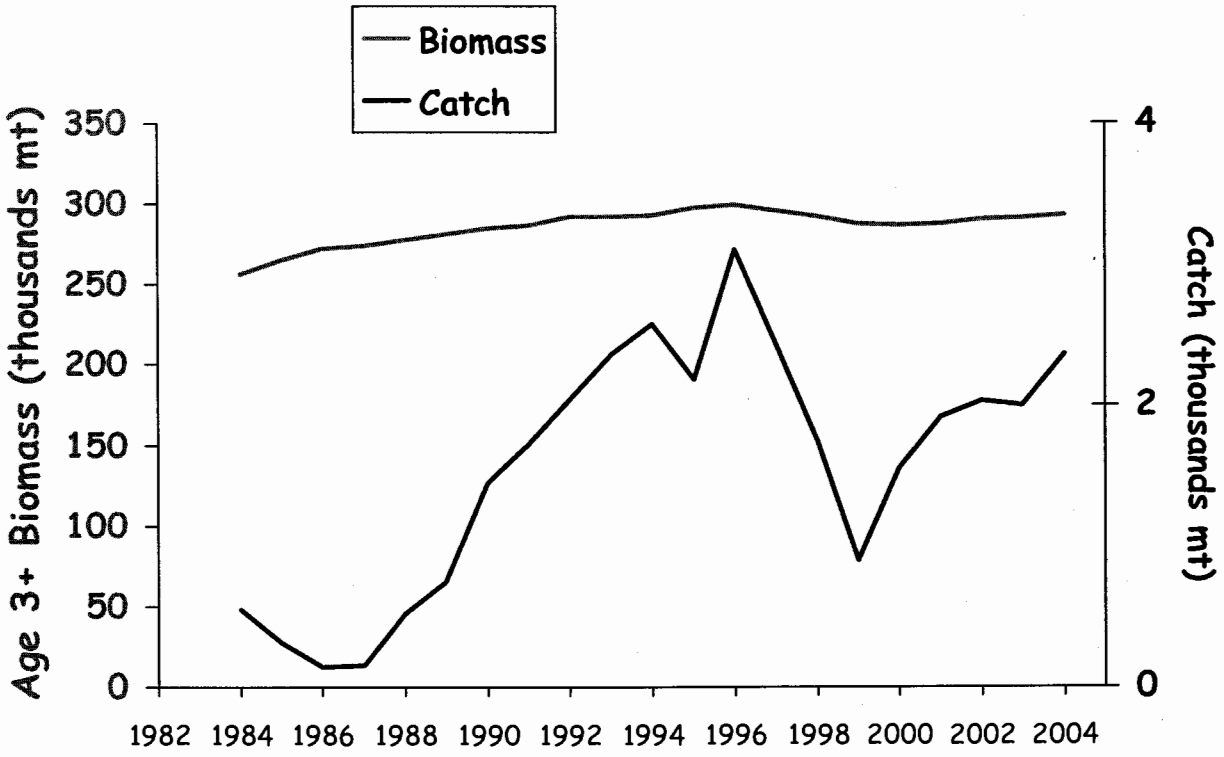


Figure B.3.3.11-1. Rex sole stock assessment model estimates of age 3+ biomass and female spawning biomass.

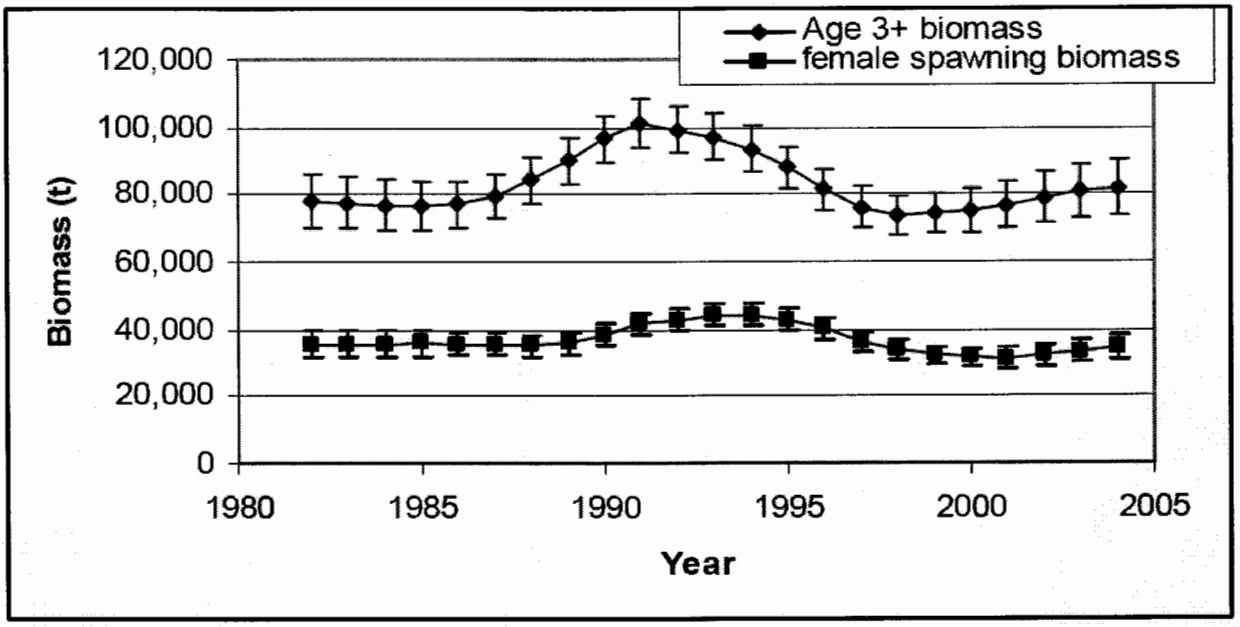


Figure B.3.3.12-1. Alaska plaice: grams epifauna/grams predator and 95 percent confidence intervals.

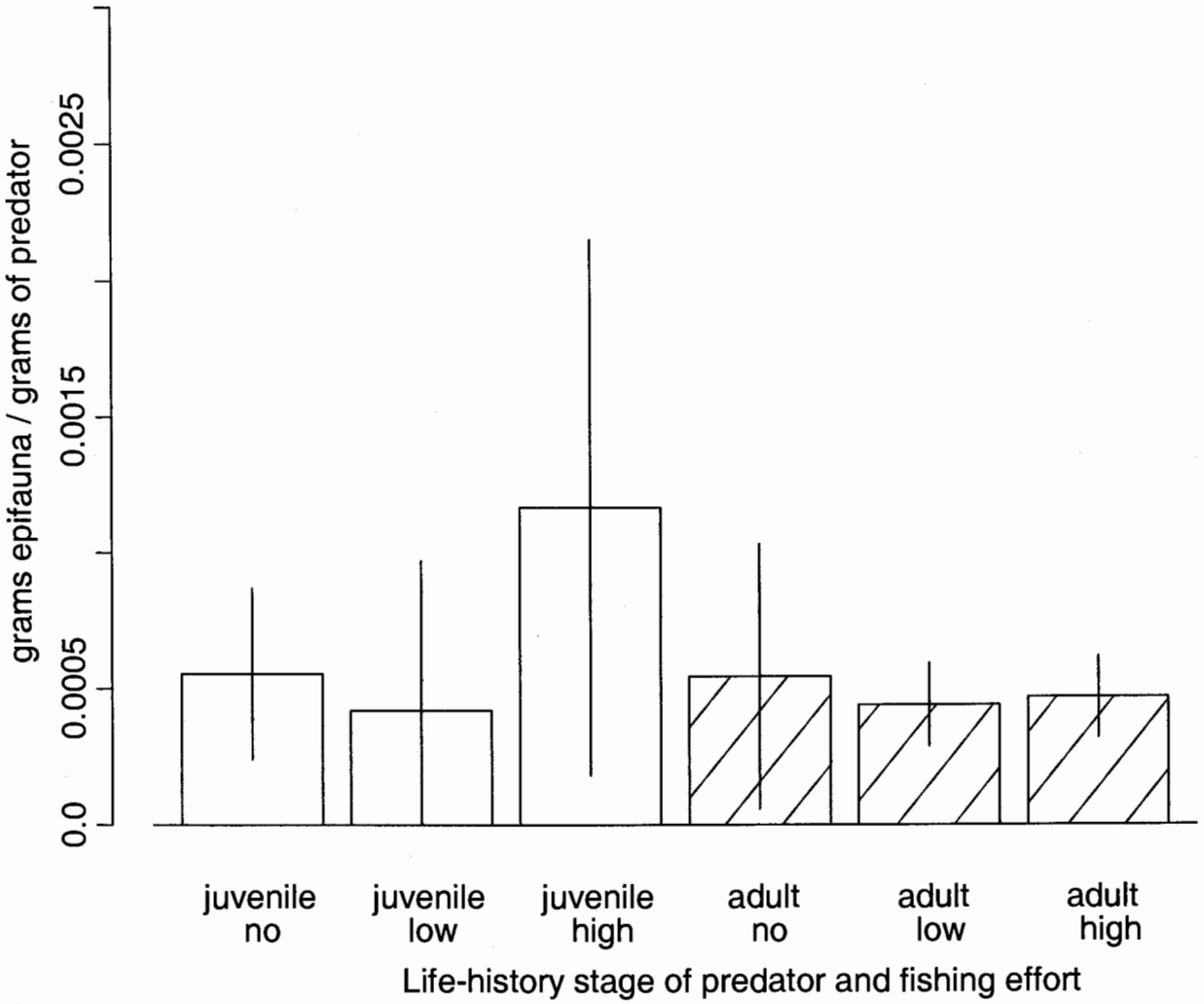


Figure B.3.3.12-2. Alaska plaice: grams infauna/grams predator and 95 percent confidence intervals.

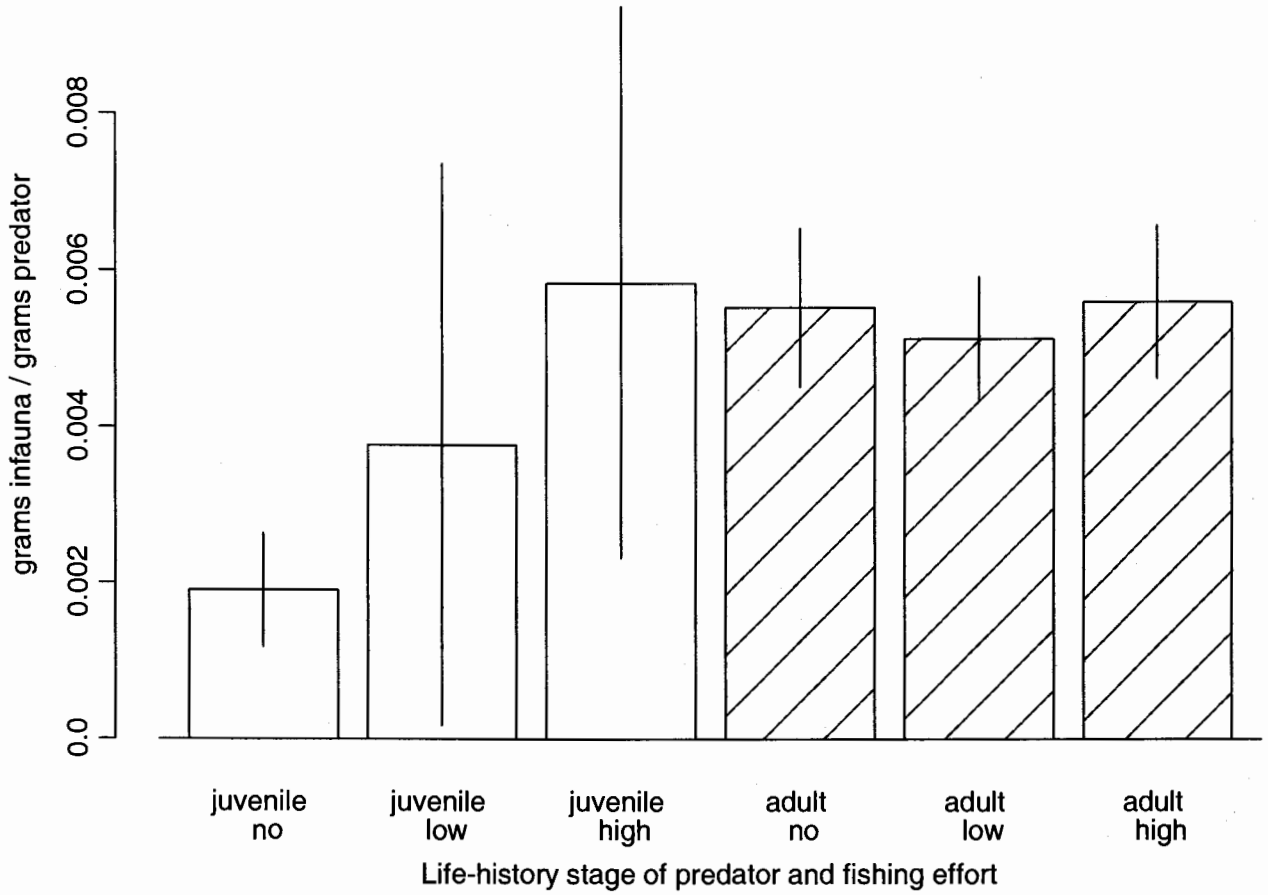


Figure B.3.3.12-3. Alaska plaice stock assessment model results of recruitment, the 35 percent biomass level, spawning biomass, and total biomass.

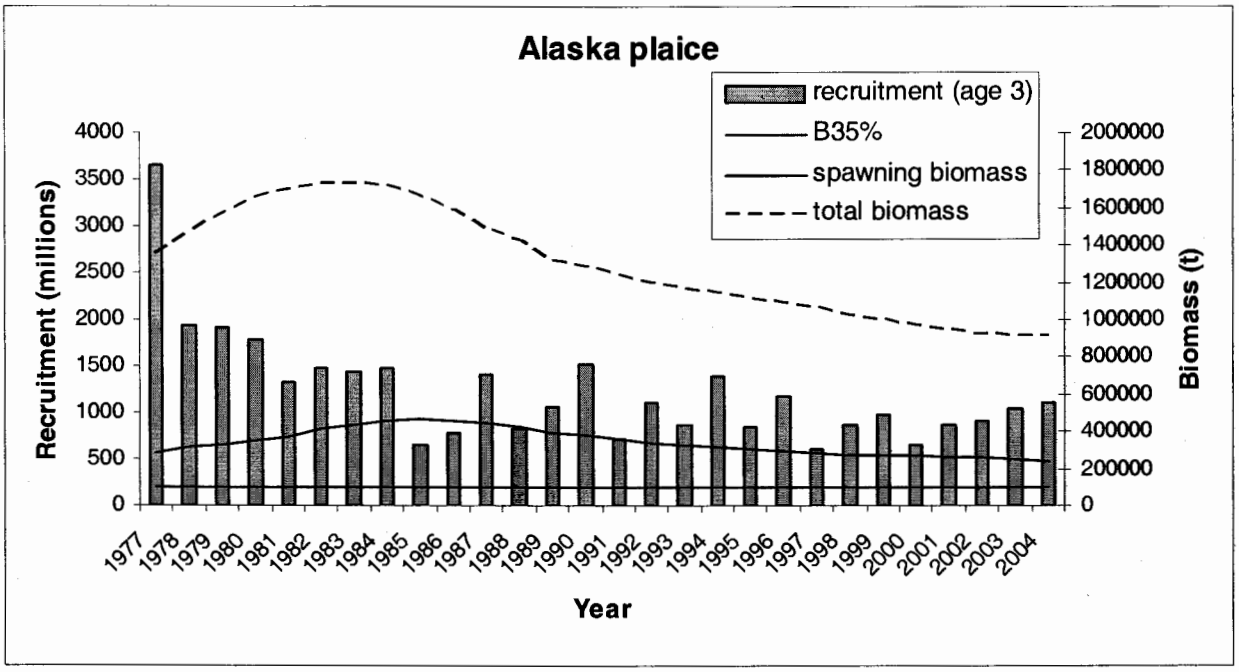


Figure B.3.3.15-1. Stock assessment model estimates of age-3 recruits (thousands), total biomass (t), spawning stock biomass (t), and 35 percent biomass (t) for Pacific ocean perch.

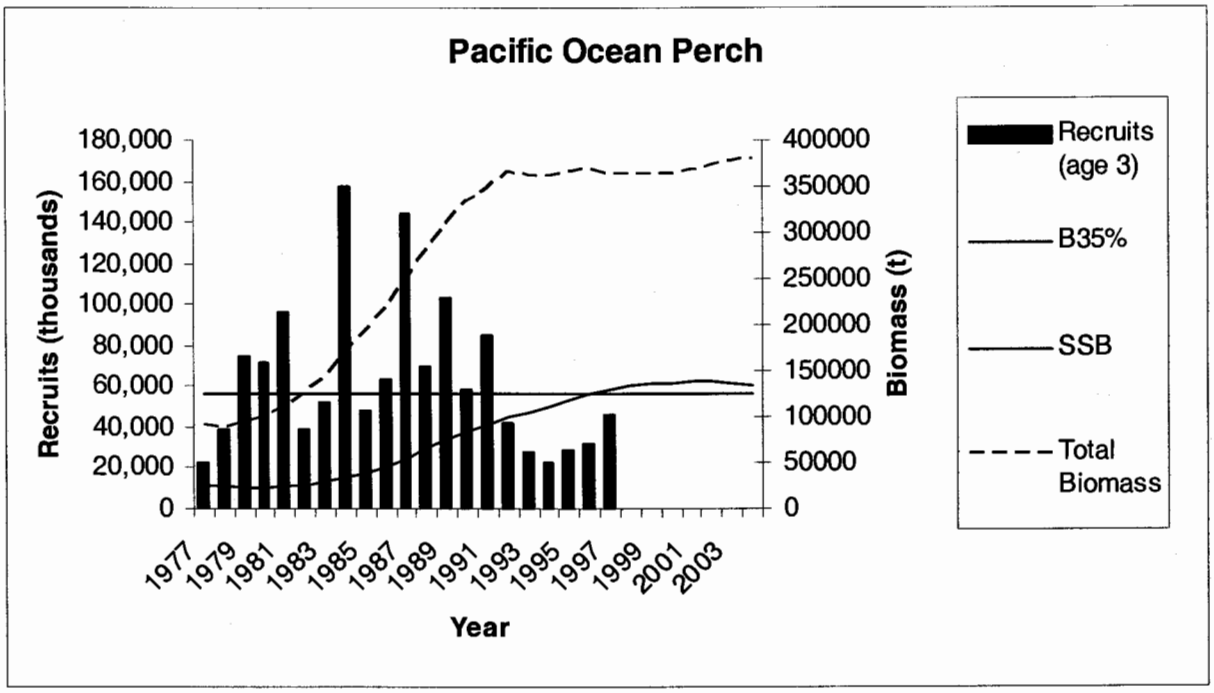


Figure B.3.3.15-2. Estimated number of hauls in the AI by year.

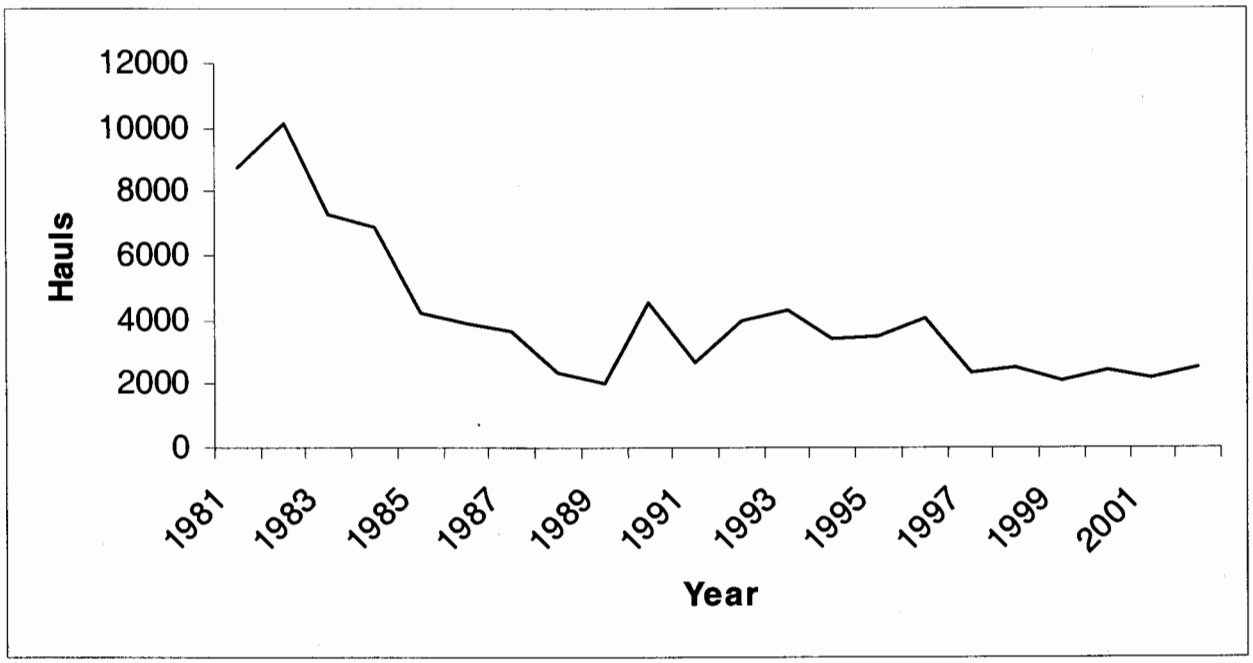


Figure B.3.3.19-1. Stock assessment model results of age-3 recruits (thousands), total biomass (t), spawning stock biomass (t), and 35 percent biomass (t) for northern rockfish.

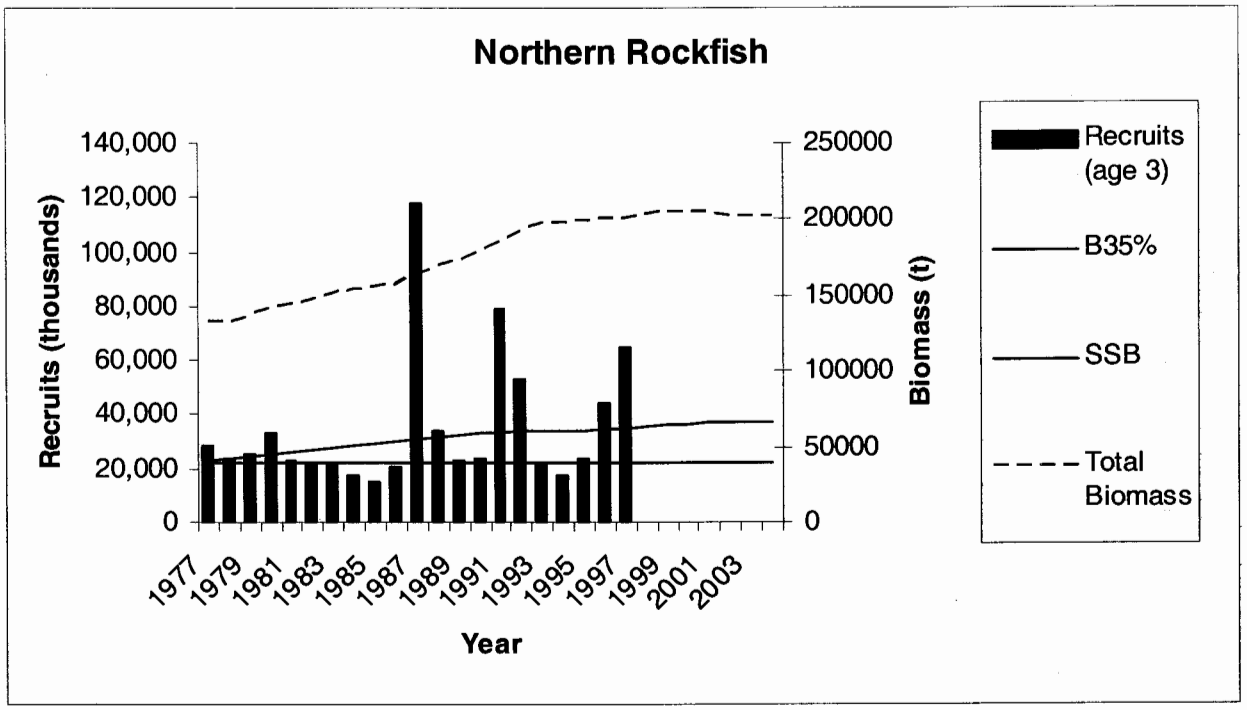


Figure B.3.3.19-2. Estimated number of hauls in the AI shallow habitat by year.